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## SMITHSONIAN INSTITUTION UNITED STATES NATIONAL MUSEUM

## **BULLETIN**

OF THE

## UNITED STATES NATIONAL MUSEUN

No. 53—Part I



WASHINGTON
GOVERNMENT PRINTING OFFICE
1905

#### ADVERTISEMENT.

This work (Bulletin No. 53) is one of a series of papers intended to illustrate the collections belonging to or placed under the charge of the Smithsonian Institution and deposited in the United States National Museum.

The publications of the National Museum consist of two series—the *Bulletin* and the *Proceedings*.

The *Bulletin*, publication of which was commenced in 1875, is a series of elaborate papers issued separately and based for the most part upon collections in the National Museum. They are monographic in scope and are devoted principally to the discussion of large zoological groups, bibliographies of eminent naturalists, reports of expeditions, etc. The bulletins, issued only as volumes with one exception, are of octavo size, although a quarto form, known as the Special Bulletin, has been adopted in a few instances in which a larger page was deemed indispensable.

The *Proceedings* (octavo), the first volume of which was issued in 1878, are intended primarily as a medium of publication for newly acquired facts in biology, anthropology, and geology, descriptions of new forms of animals and plants, discussions of nomenclature, etc. A volume of about 1,000 pages is issued annually for distribution to libraries, while a limited edition of each paper in the volume is printed and distributed in pamphlet form in advance.

In addition, there are printed each year in the second volume of the Smithsonian Report (known as the Report of the U. S. National Museum) papers, chiefly of an ethnological character, describing collections in the National Museum.

Papers intended for publication by the National Museum are usually referred to an advisory committee, composed as follows: Frederick W. True (chairman), William H. Holmes, George P. Merrill, James E. Benedict, Otis T. Mason, Leonhard Stejneger, Lester F. Ward, and Marcus Benjamin (editor).

S. P. LANGLEY.

Secretary of the Smithsonian Institution.

WASHINGTON, U. S. A., June 1, 1905.

## **CATALOGUE**

OF THE

#### TYPE AND FIGURED SPECIMENS

OF

## FOSSILS, MINERALS, ROCKS AND ORES

IN THE

## DEPARTMENT OF GEOLOGY, UNITED STATES NATIONAL MUSEUM

PREPARED UNDER THE DIRECTION OF

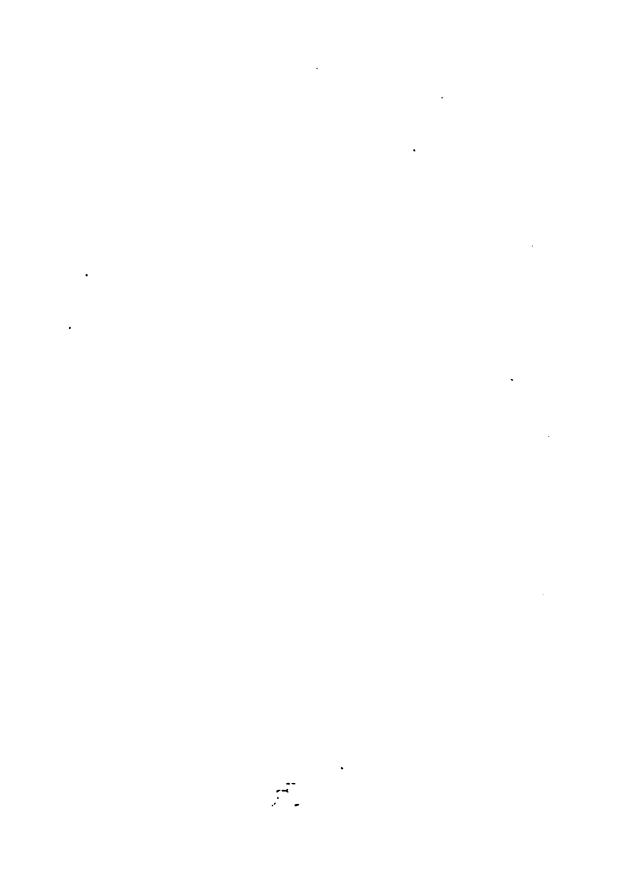
#### GEORGE P. MERRILL

HEAD CURATOR OF GEOLOGY

Part I-FOSSIL INVERTEBRATES



WASHINGTON
GOVERNMENT PRINTING OFFICE
1905



#### PREFACE.

The catalogue herewith presented includes the types and figured specimens in the division of stratigraphic paleontology of the Department of Geology and such other materials in the division of systematic and applied geology and mineralogy as have been the subject of special investigation and publication.

In order that this catalogue may be of greatest service to the specialist, for whom it is primarily designed, the material has been arranged under four heads as below, each section being accompanied by its own explanatory introduction, as prepared by the officials in charge of the respective divisions. The arrangement, then, is as follows:

Section 1. Catalogue of the types and figured specimens of fossil invertebrates, prepared under the direction of Mr. Charles Schuchert.

Section 2. Catalogue of the types, cotypes, and supplemental types of vertebrate fossils, prepared in part under the direction of Mr. F. A. Lucas.

Section 3. Catalogue of the types and illustrated specimens of fossil plants, prepared under the direction of Dr. A. C. Peale.

Section 4. Lists of minerals, meteorites, and rock and ore collections that have been the subject of special investigation and publication, prepared under the direction of the Head Curator and Mr. Wirt Tassin.

While it can not be claimed that the catalogue is absolutely complete, the changes in the personnel of the department incidental to the withdrawal of Mr. F. A. Lucas and Mr. Charles Schuchert would seem to render its issuance in printed form advisable at the present time.

GEORGE P. MERRILL, Head Curator of Geology.

v

JANUARY 1, 1905.

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#### SECTION I.

## CATALOGUE OF THE TYPE SPECIMENS OF FOSSIL INVERTEBRATES IN THE DEPARTMENT OF GEOLOGY, UNITED STATES NATIONAL MUSEUM.

CHARLES SCHUCHERT,

Assisted by

W. H. DALL, T. W. STANTON, and R. S. BASSLER.

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#### INTRODUCTION.

#### By CHARLES SCHUCHERT.

This catalogue is an alphabetic list of all the types (holotypes, cotypes, paratypes), the subsequently described or figured specimens (plesiotypes), and the artificial casts of type specimens of fossil invertebrates in the Department of Stratigraphic Paleontology of the U. S. National Museum previous to 1905. No account is taken of "typical specimens" nor of such studied material as has served in publications but which is not so recorded in the literature of paleontology and stratigraphic geology.

The information relating to each entry is given in the following order: (1) Catalogue number of the department registers, (2) name of species practically as written in the work cited, (3) kind of type, (4) formation, (5) locality, (6) author and place of publication, and (7) remarks on the present name if different from the one cited, or a cross reference when the same species appears in the catalogue under more than one name. Some notice is taken of synonymy, but as a rule only when this had been known previous to the making of this catalogue. In the case of remarks, these are always in brackets and signed by the author of the information, when not furnished by the present writer.

No record is made of figures republished in text-books. In cases where a part of the material is lost, this fact is noted by the absence in the citation of the figures representing the missing material, no account being taken where all the specimens of an author are lost.

An author's name in parenthesis indicates that the person cited did not use the genus or combination as given. It has not been thought necessary to give the author who first made the change as adopted in this catalogue.

This catalogue was begun in response to a circular letter by the late Dr. G. Brown Goode, dated December 17, 1895. He wrote:

I am anxious to include a statement exactly, or approximately, showing the number of species, represented by types, in each department. \* \* \* It is proposed to publish at an early day a series of full catalogues of the type specimens in the several departments of the museum.

At that time no catalogues of this nature had been prepared, nor were all the type specimens distinguished in the collection. The writer then made a card catalogue of the Paleozoic forms, while Dr. T. W. Stanton and Dr. W. H. Dall assisted with the Mesozoic and Cenozoic species,

and on March 9, 1896, the presence of type material for 3,603 animal species was reported.

Since that time the writer, with the assistance of Messrs. Dall, Stanton, T. W. Vaughan, Ralph Arnold, R. S. Bassler, and Miss M. W. Moodey, has kept the catalogue up to date. The preparation of the office catalogue for the printer was done by Mrs. M. S. F. Jouy and Miss Lucy Graves.

Type specimens have come to the U. S. National Museum in an everincreasing quantity, and in the purchase of the E. O. Ulrich collection not less than 1,600 species were added during the past four years. The R. D. Lacoe collection furnished about 200 species, chiefly insects. This catalogue records not less than 11,490 type specimens in the National Museum, representing about 6,100 species of fossil invertebrates distributed through the various sections of the department, as follows:

	Specimens (about).	
Paleozoic invertebrates Mesozoic invertebrates Cenozoic invertebrates Fossil insects	6, 310 2, 683 2, 226 271	2, 803 1, 291 1, 781 225
Total	11, 490	6, 100
Holotypes	2, 730 4, 996 3, 764	2, 730 1, 878 1, 492
Total	11,490	6, 100

The type specimens are largely from North America, but there is also material from the West Indies, from Brazil, Chile, Peru, New South Wales, and Arctic Siberia.

It can be stated with considerable certainty that the larger American museums have carefully guarded the safe-keeping of fossil type specimens. As long ago as 1853 Louis Agassiz<sup>a</sup> wrote of the importance of type specimens. Here he reviews a "Catalogue of the Cabinet of Natural History of the State of New York" and says:

The regents of the University deserve great credit for directing the publication of this catalogue. Nothing is better adapted to secure permanently the interest for public collections and to contribute to their increase than the circulation of such catalogues. We only regret that no more direct reference is made to the individual specimens described and figured in the Natural History of New York. The importance of preserving such records to favor the researches in case of doubts, upon the identity of newly discovered species, can not be overrated, and we would particularly call the attention of all directors of museums to this point. The chief value of many of the museums of Europe arises from the circumstance that they contain the original specimens described by the naturalists who have brought our science to its present condition.

In 1860 Spencer F. Baird, then assistant secretary of the Smithsonian Institution, said in the annual report of that year:

The great value of the museum of the Institution at the present time consists in its being the depository of so many type specimens, or those upon which the first description of species has been established. These constitute the great attraction to the scientific investigators, as, however carefully prepared, the published description or figures of any species may be, there is almost always some doubtful point to be settled alone by examination of the types. For this reason these are always guarded with jealous care, and considered of much more value than new and undescribed materials (p. 76).

In the following year, however, we find the Institution adopting a rule to "distribute as widely as possible to scientific institutions \* \* \* the duplicate type specimens" (p. 41). In all probability this referred rather to typical specimens than to type specimens in the modern sense, yet it seems that some types have been either given away or lost through the neglect of authors to return all the material loaned them for study. However, not many types have been lost during the past fifty years, probably less than 100 specimens. Some of these are known to be in other museums, but as they were collected on Government expeditions they should seemingly be in the National Museum.

#### ON TYPE SPECIMENS IN NATURAL HISTORY.

Most naturalists now concede that type specimens constitute the most important material in a museum of natural history. The true appreciation of this fact, however, has become general only very recently, as shown in the numerous lately published catalogues of types possessed by different museums. Nearly all of these publications have appeared in America and England. This just valuation of type material in recent years has come about through the work of specialists in their efforts to monograph groups of organisms. In those branches of biology where original descriptions are usually accompanied by figures the value of type material is not so apparent as where no illustrations are given. It is, however, upon the type material that the entities of natural history rest. Therefore it is of the greatest importance to learn the whereabouts of types.

There is considerable diversity of opinion as to what is meant by a type. Professor Marsh<sup>a</sup> writes:

A type in Paleontology should consist of the remains of a single individual, and this should stand as the original representative of the name given. A second specimen, or even more, may be used later to supplement the first, but not to supplant it. This, however, has been done by some authors, with the natural result of causing endless confusion in the nomenclature.

#### Oldfield Thomas b states:

The word "type" itself when first introduced was meant to refer to the particular specimen (in the singular) originally described, but it soon was naturally applied to

any individual of the original series, if more than one specimen was examined by the describer. In this there was little cause for confusion, but more recently it has been applied to any individual from the collection of the original author, obtained no matter how much later, and often not even determined by him as belonging to his species. Of late a still further cause of confusion has been introduced by certain authors who, obtaining specimens from the typical locality, have spoken of them as "typical specimens," a method of reference which, although due to a praiseworthy regard for geographical exactness, is yet certainly liable to give rise to inconvenience and confusion.

The late Dr. G. Brown Goode, in a circular letter to curators in the U. S. National Museum, dated July 1, 1893, wrote that—

By a type is meant a specimen which has been used by the author of a systematic paper as the basis of detailed study, and as the foundation of a specific name. In cases where a considerable number of specimens has been used it is desirable to separate one or more as being primary types, while the other specimens, which may have been used in the same study for the purpose of comparison, may be regarded as collateral types.

These citations show clearly that a type is not always restricted to a single specimen selected by an author, but also applies to several or even to all the specimens contained in the original lot. Moreover, the word type has been applied to specimens sent out by the author of a species, but not used in the original description. Students of parasitic insects often rear numerous individuals from a single mother of a new species, any one of which is naturally as much like the type as those selected by the author. Some of the individuals of such broods are distributed to other workers and museums as types. For a clear description of a new species a paleobotanist may require as many individuals as there are specimens selected for study, all of which are regarded as types. Because of the general imperfection of fossils, much of the original material is usually accepted by paleontologists as types; but when specimens are figured, as is generally the custom, it is good practice to regard these alone as types. The writer is not aware that any invertebrate paleontologist in America until recently considered a species to be based upon a single specimen if others are present at the time of original publication. It is doubtful if many species, living or extinct, can be defined from a single individual; hence a multiplicity of types is generally a necessity. In birds and mammals, where the sexes usually exhibit marked differences, there are seasonal modifications, a bony skeleton, geographical and individual variation, and stages of growth, and all these parts and variations require material for the proper and final interpretation of species. The practice of selecting a single example as the type, however, has its advantages, since all doubt is thus removed when a new species is later found to contain diverse elements.

The writer and others believe that terms are necessary to distinguish the various kinds of type specimens. This is seen by the continually wider acceptation of the terms proposed by Thomas, Schuchert, and Cossmann. In regard to the desirability of type terms, Bather a states:

This \* \* \* shows how necessary the definition of these terms has become. It also exemplifies a danger that needs constant guarding against, namely, the employment of a common word in a restricted \* \* \* sense. The man in the street knows the meaning of "type" and "typical," but the meaning of those terms to the zoologist is something quite different.

The following classification of type specimens is an expression of individual opinion, in the hope that biologists will, when necessary, emend the different definitions here given or offer new ones, so that a proper terminology in regard to type specimens may come into general use.

#### CLASSIFICATION OF TYPE SPECIMENS.

All type specimens in biology may be divided into two groups—type material and typical specimens.

TYPE MATERIAL includes all specimens which have served as the basis for published primary and supplementary descriptions and figures of organisms. These are again divisible into two sections—primary and supplementary types.

PRIMARY TYPES, or PROTEROTYPES.—These are the original specimens of any described or figured new species. In a letter to the writer, Buckman has proposed for the English term the collective name Proterotypes. They are usually referred to by zoologists, botanists, and some paleontologists as "types." Primary types are again divisible into holotype, cotype (or syntype), paratype, lectotype, and chirotype.

SUPPLEMENTARY TYPES.—These consist of the described or figured specimens used by any author in supplementing or correcting knowledge of a previously defined species. This section is divisible into PLESIOTYPE, NEOTYPE, and HEAUTOTYPE.

Typical specimens, or Icotypes.—These have not been used in published descriptions or figures, but consist of material which authors have worked on or such as has been or can be collected at the original localities of new species. In a letter to the writer, Buckman proposes for these types a good collective term—Icotypes, meaning that which is like, probable (= types having resemblance to proterotypes). Typical specimens are divisible into TOPOTYPE, METATYPE, HOMGEOTYPE, and IDEOTYPE.

Besides "type material" and "typical specimens" there are other entities of a type nature to which authors have seen fit to apply a terminology. Such are "type drawings," "reproductions of type specimens," "type species of genera," and "types of organisms in relation to geographic distribution." These will be defined further on.

#### PRIMARY TYPES, OR PROTEROTYPES.

HOLOTYPE (Schuchert, 1897).—A holotype in natural history is a particular individual deliberately selected by the author of a species, or it may be the only example of a species known at the time of original publication. A holotype therefore is always a single individual, but may embrace one or more parts, as the skin, skeleton, or other portions, such as the obverse and reverse of a natural mold. When a holotype is selected, but other specimens are also described, the latter must be known as paratypes. When no holotype is selected, and more than one specimen is described, all become cotypes. Therefore, the original material of any species can not include a holotype and cotypes, but may include a holotype and paratype, or all may be cotypes.

Among zoologists and botanists, it is almost general to use the term "type" in the sense that holotype is here used. Palmer<sup>a</sup> defines type as follows: "A type is the identical individual specimen from which a species has been described." Underwood<sup>b</sup> states: "By a type is meant botanically the original specimen from which the species was described when it was first made known."

In cases where a holotype is selected, but is neither marked nor a description given to distinguish it from the associated materials, the holotype practically does not exist.

In cases where a holotype has been selected, but the diagnosis is found to contain more than one species, the remaining material will always constitute the paratypes of the original description. These will not necessarily remain as such under another name.

The author of a new species having failed to select a holotype, no subsequent author can do this for him. No just law is retroactive. However, when but a single individual is figured, the original of the PROTOGRAPH (new) is to be regarded as the holotype. (PROTOLOG=original description; PROTOGRAPH=original figure, according to Buckman.)

Where the sexes are different and can be distinguished, a male or a female specimen should be selected as the holotype, but not both.

A species described as new, and proving to be a synonym, does not affect the type material of the species with which it is synonymous. All such synonymous material, however, should be carefully preserved and marked as holotype or cotype under the original name as well as under the one of which it is known to be a synonym.

To the writer it does not seem necessary to coin other terms for parts of a holotype where species are made up of separable parts. In all such cases exactness can be secured by writing holotype (obverse), holotype (dorsal vertebra), holotype (right valve), etc.

See also neotype.

Cotype (=associate type, or syntype a).—Cotype was apparently first introduced by Waterhouse, and is redefined by Oldfield Thomas as follows: "A cotype is one of two or more specimens, together forming the basis of a species, no type [holotype] having been selected. No species would have both type [holotype] and cotypes, but either the former [or holotype and paratype], or two or more of the latter." In cases where the cotypes are unmarked and can not be distinguished from the balance of the original series, the only safe plan will be to regard all the original material of a new species as cotypes. If such specimens are subsequently sent out to collectors and museums they should be marked as cotypes.

Cossmann b states "as for cotype and paratype, one questions if it is really worth while to name them, especially where the type has been designated; and if that has been lost, it is necessary then to substitute a 'neotype.'" To the writer this conclusion appears faulty for the following reasons: When a holotype is selected, or because it is the only specimen on which the species rest, then Cossmann's conclusion of course follows. However, in all those cases where an author has more than one specimen of his new species, why are not these of far more value in understanding the intention of the original describer than any For instance, when an author selects a holotype out of several specimens, and it is lost, are we not obliged to consider first the remaining specimens, the paratypes, rather than other material selected by another and later author (neotypes)? In the case of cotypes, so long as one remains to us we are similarly obliged to consider it first, in connection with the original description and figures. The terms cotype and paratype are automatic in application, for if an author selects no type out of several specimens all become cotypes, and if he selects a holotype the remainder are paratypes. These terms, it is true, have as a rule no special value in the original descriptions of species, but to subsequent workers and above all to keepers of public collections they have considerable worth in that they indicate the exact nature of their type material.

See synthetograph and heautotype.

PARATYPE (para=beside).—Thomas states: "A paratype is a specimen belonging to the original series, but not the type [holotype], in cases where the author has himself selected a type [holotype]. It should, however, be one of the specimens mentioned or enumerated in the original description."

A paratype may be subsequently selected as a holotype when it proves to be a new species and is not the species to which it was originally referred.

a[F. A. Bather.] Scientific Volupuk, Natural Science, IV, Jan., 1894, p. 57.

bRevue Critique de Paléozoologie, April, 1904, p. 74.

For further remarks, see cotype.

LECTOTYPE (new).—Where the original diagnosis is without illustrations or is accompanied by figures based on two or more specimens, the first subsequent author is at liberty to select from these cotypes a type for the old species, adhering, as far as can be ascertained, to the intention of the original author. Such a type specimen is to be designated as a LECTOTYPE (=a chosen type). From the remaining cotypes, or from other material in his possession, he may select the holotype or cotypes of his new species.

CHIROTYPE (new).—This term is proposed for the material upon which a published manuscript name is based. It is a term equal in value to "Chironym: A manuscript name; an unpublished name." The former applies to specimens, the latter to the written name. Just as soon as a chirotype is properly published, the term will no longer apply to it, and the material will become either a holotype, paratype, or cotype.

#### SUPPLEMENTARY TYPES.

PLESIOTYPE.—Cossmann  $^b$  first proposed this term with two meanings, which Buckman, in a letter to the writer, summarizes as follows:

- 1. A species akin to the monotype representative of the genus at another geological horizon or in another zoological province.
- 2. A specimen, not a topotype, figured or described as an example of an already named species.

In 1904, Cossmann redefined this term in accordance with his second meaning, and it is in this sense that the present writer uses it in this catalogue. He states:

An individual [of a described form], whether from the same locality or from another deposit, which one compares with a species and for which one gives a new description and a new figure, is a plesiotype of that species.

In 1897, Schuchert proposed for identical material the term Hypotype, which is therefore a synonym of Cossmann's name. Further, hypotype is in use with another meaning: "Subtypical; not quite typical." (Cent. Dict.)

Thomas' thinks this term (hypotype=plesiotype) "too general to be of much definite use." This criticism has also been made by others, but the writer fails to see what can be gained by dividing these supplementary types into different categories. After all, it is the primary types on which the taxonomy rests, and the supplementary types (plesiotypes) simply help to elucidate the original material. The only other kind of supplementary types worthy of distinction are those selected plesiotypes on which the species will rest when the original types are lost, destroyed, or inadequate for the determination of the specific characters. These have been named by Cossmann Neotypes.

a Coues, Auk, IX, 1884, p. 321.

b Essais de Paléoconchologie comparée, 1896, pp. 2, 3.

c Science, Sept. 24, 1897. p. 486.

NEOTYPE.—Cossmann, in proposing this term, gave it also two meanings, which are summarized by Buckman as follows:

- 1. A species taken as the type of a genus of which no type was originally indicated, while the species first mentioned by the author has been made the type of another genus.
- 2. A topotype figured or described to represent a species of which the original specimen [holotype] has been lost or destroyed.

The term is here used as redefined by Cossmann in 1904, on the basis of his second meaning, as follows:

Neotype for the specimen afterwards taken as the type of a species when the original type [holotype] has been destroyed or has disappeared with the necessary guaranty of its authenticity; but it seems indispensable that the new specimen should come from the same locality and exact horizon.

The writer would use this term not only as limited by Cossmann, but would have it embrace all such subsequent specimens of a species as become the standard for reference, owing to the original types being lost, destroyed, or unrecognizable, or inadequate for the determination of the specific characters. Among invertebrate species neotypes will, as a rule, be restricted to Cossmann's definition, but among vertebrates and plants the term will be used for individuals more perfectly preserved than the holotypes.

In this connection a statement by Marsh a is appropriate:

Among the invertebrates, especially those now living, types [=holotypes] are usually complete enough to show the more important features. \* \* \* Among the vertebrates of the past the case is much more serious. \* \* \* A single tooth or a vertebra may be the first specimen brought to light in a new region, and thus become the sole representative of a supposed new form. The next explorer may find more perfect fragments of the same or similar forms, and add new names to the category. A third investigator, with better opportunities and more knowledge, may perhaps secure entire skulls or even skeletons from the same horizon, and thus lay a sure foundation for a knowledge of the fauna.

It would seem that any specific name based on a fragment or part of an organism, even though it be but a single tooth, fragment of an ammonite, or a leaf, should for all time, whether extant or not, be the holotype of the species. In fact any specific name must continue to rest upon the originally selected material, for otherwise nomenclature will have no permanency. But in many cases, and this is especially true of such organisms as are built up of separable parts, it seems advisable, when the holotype is inadequate, to select a second type—a neotype. The neotype is of course a supplementary type, as it is not one of the original or primary types.

This term can be also applied to specimens, the import of which fact was called to the writer's attention by Bather.<sup>b</sup> He asks:

When the holotype and paratypes of a species have gone the way of all flesh; when topotypes are impossible and metatypes unknown; when even its plastotypes

are not to be had, then what are we to call the specimen selected for special description by the reviser and reestablisher of the species?

The writer would therefore define a neotype as a supplementary type selected by an author, on which a species is to rest because of the loss of the original type or where the original material still extant is so poor or fragmentary that from it the characters of the species can not be determined with certainty.

HEAUTOTYPE (new).—In a letter to the writer, Buckman proposes this term for "a specimen figured by an author as an illustration of his own already founded species such not being a proterotype" (=primary type). The same writer, in 1899, used the term autotype, but as this word is also in use for certain printing blocks he changes it here to heautotype.

#### TYPICAL SPECIMENS, OR ICOTYPES.

TOPOTYPE (Thomas).—A specimen collected at the exact locality or within a few miles of the place where the original type of a species was obtained.

In paleontology it is further demanded that the topotype should come not only from the exact locality but also from the identical stratum that furnished the species.

Topotypes and metatypes have been wrongly included by Œhlert (Palaeontologia Universalis, 1904) under Schuchert's term "supplementary types" or hypotypes (=plesiotypes). These specimens have not the value of "type material" as here defined, but belong to the category of "typical specimens."

METATYPE (Thomas).—"A specimen received from the original locality [in paleontology, the exact stratum as well] after the description has been published, but determined as belonging to his own species by the original describer himself." (See ideotype.)

Metatype has been redefined by Walsingham and Durrant a as follows: "A specimen subsequently named by the author after comparison with the type is called a Metatype." As this is not the meaning given by Thomas, it can not be accepted. The latter b says:

The objection to "hypotype" [=metatype] as being too general and covering too many specimens of different origins applies even more strongly to Lord Walsingham and Mr. Durrant's proposed extension. \* \* \* Many a museum worker, who has to name large series of specimens from all sorts of localities, must constantly put under one of his own names specimens which may be anything but typical, and it would be absurd to call the whole of a museum series of a common animal "metatypes" merely because the name of the species happened to have been proposed by the person who determined the specimens.

HOMGOTYPE.—Under the name HOMOTYPE, Walsingham and Durrant define this term thus: "A specimen named by another than the author, after comparison with the type, is called a Homotype." How-

ever, as this word has a different usage in biology, it can not be employed with another meaning. It is therefore changed to homœotype (=similar type).

Thomas, a in regard to this term (homotype), says that it "might suitably be employed for any specimens that had been compared with the type." The term is a very useful one, and large museums now have abundant opportunities to mark such material. The writer, therefore, will define it as follows:

A homœotype is any supplementary specimen that has been carefully compared with the primary types by any worker of recognized standing in the class of organisms to which the material belongs.

IDEOTYPE (new).—Dr. S. S. Buckman has called attention to other typical specimens which he calls ideotypes. These are the specimens from any place except the original locality, named by an author of a species after publication. When similar specimens are from the original locality they are metatypes.

#### TYPE DRAWINGS.

PROTOGRAPH (new).—Buckman suggests this term for the original figure or figures illustrating a holotype. The original description is the protolog.

Synthetograph (new).—Authors occasionally base a new species upon several specimens, illustrating the form by a drawing which subsequent authors assume to be based on a single individual, but which in reality is a composite figure. Buckman<sup>b</sup> states: "Notice may be taken of the cases wherein a figure has been made from a combination of two specimens. This practice would easily lead to a nonidentification of the types unless the facts had been carefully noted. It is an undesirable practice."

When no type is selected by the original author, it has become the custom for subsequent workers to accept as the holotype the specimen which had been delineated, the delineation being the protograph. But when it happens that the delineation has been drawn from more than one specimen, such a composite figure should be distinguished as a Synthetograph; and the specimens from which the figure was made become cotypes. The term is applicable only to the illustration. The making of such drawings to-day is rare, but in the earlier days of paleontology this was not the case. The practice is to be condemned, but a term is needed for such drawings as have been made.

#### REPRODUCTIONS OF TYPE SPECIMENS.

In 1897 Schuchert proposed the term PLASTOTYPE for any artificial specimen molded directly from a primary type. There are many specimens of this kind in existence, cast directly from primary or secondary

types. These plaster of Paris, sulphur, or lead castings, gutta-percha squeezes, or electrotypes are often quite as good as the originals. No models, however, are included, since they are not cast from type material.

#### TYPES OF GENERA, OR GENOTYPES.

In 1897 Schuchert proposed the term GENOTYPE for "any typical material of the type species of a genus." Subsequently he, as well as others, applied this term to the selected type species (not upon the specimens, as is stated in the original definition) upon which the genus is based. The original definition is undoubtedly wrong, because genera are not based upon particular individuals, but upon species as a whole. In a letter to the writer (January 9, 1905), Buckman suggests that geno be prefixed to the primary type terms, thus making a "completely congruous series." With this suggestion, the following terms result:

Genoholotype.—The one species fixed by an author as the type of a genus.

Genosyntypes.—More than one species are mentioned by authors as the types of a genus, but no one is definitely selected. These may be monotypical or heterotypical.

Genolectotype.—A species subsequently selected by an author as the genoholotype of a genus, from genosyntypes.

Some years ago Walsingham and Durrant a proposed a set of similar terms, but as most of them are preoccupied names they are not adopted here. However, to complete this article of definitions, they are here reproduced:

A genus from its foundation belongs to one of three classes:

(1) Monotypical (i. c. described from a single species, no other being known; or described from a single specified species with which are associated other species considered to be identical in structure).

[The word monotype is also in use for printing apparatus.]

- (2) Isotypical (i. c., described from more than one species, all of which are congeneric). [The term isotype was used by Gill in 1881 with a different meaning. It is defined on a later page.]
- (3) Heterotypical (i. e., described from more than one species, these differing in structure).

### TYPES OF ORGANISMS IN RELATION TO GEOGRAPHIC DISTRIBUTION.

MIMOTYPES (mimic and form): Forms distantly resembling each other, but fulfilling similar functions, and thus representing each other in different faunas; e. g. (1) the Shrews of Europe are mimotypes of the Antechinus of Australia; (2) the Sloths of South America of the Phascolarctidæ of Australia, etc. By the use of this term the word "analogue" may be relieved of a part of the burden borne by it.

ISOTYPES (equal or like and form): Forms common to different countries; e.g., the Shrews are isotypes in Europe and North America, etc. [Productus punctatus and P. semireticulatus are isotypes of different Carboniferous seas.]

NECROTYPES (dead and form): Forms formerly existing in a country but now extinct; e. g., the horses and rhinoceroses are necrotypes of North America, indigenous species having once flourished on that continent, but become exterminated in prehistoric [or previous geologic] times. a

The Century Dictionary defines this term thus: "A type formerly extant in any region, afterwards extinct; thus, indigenous horses and rhinoceroses are *necrotypes* of North America."

#### MARKING OF TYPE MATERIAL.

All type material should be plainly and permanently marked to distinguish it from other specimens. If this is carefully done, much doubt will be removed for subsequent students. When such material is large, as birds and mammals, a small highly colored card or a piece of plain zinc may be attached, upon which should be printed or stamped the proper term indicating the kind of type and the museum catalogue number. In paleontology, it is the custom to glue small red or green diamond or star-shaped tickets upon the type material, in addition to the catalogue number, when sufficiently large to permit of this without covering too much of the specimen. The small specimens are placed in numbered vials or in boxes. In the Woodwardian Museum (Cambridge, England), type fossils are mounted on blue tablets. This arrangement, however, has the disadvantage of giving the exhibition series a checkered appearance, and should the specimens become loosened and displaced there is danger of the types being overlooked.

#### LITERATURE ON TYPE TERMS.

BATHER, F. A.—A postscript on the terminology of types. Science, May 28, 1897, pp. 843-844.

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COUES, ELLIOT.—On some new terms recommended for use in zoological nomenclature. Auk, IX, 1884, pp. 320-322.

GILL, THEODORE N.—Zoology. Ann. Rept. Board Regents Smithsonian Institution for the year 1881 [1883], p. 460.

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PALMER, T. S.—Index Generum Mammalium. North American Fauna, No. 23, 1904, U. S. Dept. Agriculture, Div. Biol. Surv.

Schuchert, Charles. — What is a type in natural history? Science, April 23, 1897, pp. 636-640.

a Gill, Smithsonian Report for 1881 (1883), p. 460.

- THOMAS, OLDFIELD. -Suggestions for the more definite use of the word. "type" and its compounds as denoting specimens of a greater or less degree of authenticity. Proc. Zool. Soc. for 1893, pp. 241-242.
- UNDERWOOD, LUCIEN M.—The Royal Botanic Gardens at Kew. Science, July 21, 1899, pp. 65-76.
- WALSINGHAM (LORD) and DURRANT, JOHN HARTLEY.—Rules for regulating nomenclature, with a view to secure a strict application of the law of priority in entomological work [also known as the Merton Rules]. London, 1896.
- WOODS, HENRY.—Catalogue of the type fossils in the Woodwardian Museum, Cambridge. With a preface by T. McKenny Hughes. Cambridge Press, 1891.

# CATALOGUE OF THE TYPE SPECIMENS OF FOSSIL INVERTEBRATES IN THE DE-PARTMENT OF GEOLOGY, UNITED STATES NATIONAL MUSEUM.

111587. Abra æqualis (Say.).
Miocene. Jericho, New Jersey.

Cotype.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 80, pl. 14, figs. 11-15.

[This is Amphidesma burnsi Whitfield op. cit. p. 79, pl. 14, figs. 16–18, and belongs to the genus Semele. W. H. Dall.]

=Semele burnsi.

See Amphidesma burnsi.

135700. Abra triangulata Dall.

Holotype.

Oligocene. Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 997, pl. 49, fig. 4.

38042. Acantherpestes inequalis Scudder. Cotypes. Upper Coal Measures. Mazon Creek, Grundy County, Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, p. 424, pl. 33, figs. 2, 4; Foss. Insects N. America, I, 1890, p. 400, pl. 25, figs. 2, 4.

38038. Acantherpestes major (Meek and Worthen). Plesiotypes. 38039. Upper Coal Measures. Mazon Creek, Grundy County, Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1882, p. 150, pl. 11, figs. I-4, 6-8, 11; Foss. Insects N. America, I, 1890, p. 202, pl. 8, figs. I-4, 6-8, 11.

22937. Acanthoceras? kanabense Stanton. Cotypes. Colorado (Cret.). Upper Kanab, Utah.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 181, pl. 36,

figs. 6–8.

43411. Acanthocladia anceps Schlotheim. Plesiotypes and figured sections.

Permian. Poesneck. Germany.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 635, pl. 56, figs. 1-1c.

43409. Acanthoclema confluens Ulrich. Plesiotypes. Keokuk (Miss.). Nauvoo, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 662, pl. 70, figs. 5-5b.

38844. Acanthotelson? magister Packard. Holotype.
Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Packard, Mem. Nat. Acad. Sci., III, 1886, p. 125, pl. 1, fig. 2;pl. 2, figs. 4, 5.

38845. Acanthotelson stimpsoni Meek and Worthen. Plesiotypes.

Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Packard, Mem. Nat. Acad. Sci., III, 1886, p. 123, pl. 2, figs. 1-3.

8163. Acella haldemani White. Cotypes.

Bear River (Cret.). Mouth of Sulphur Creek, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878, Pt. I (1883), p. 84, pl. 30, figs. 9a, 9b; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 445, pl. 6, figs. 18, 19.

See Tortacella haldemani.

20066. Acella micronema White. Eocene. Wales, Utah.

Cotypes.

White, Bull. No. 34, U. S. Geol. Surv., 1886, p. 22, pl. 2, fig. 14. [Limnæa (Pleurolimnæa) tenuicostata Meek and Hayden. T. W. Stanton.]

8030. Acervularia adjunctiva White. Cotype.

Lower Carboniferous. Blackfoot Range, south of Yellowstone National Park.

White, Proc. U. S. Nat. Mus., II, 1880, p. 255, pl. 1, figs. 1-3; Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878, Pt. I (1883), p. 120, pl. 35, figs. 1a-1d.

14568. Acervularia pentagona (Goldfuss). Plesiotype.

Upper Devonian. Treasure Hill, White Pine District.

Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 31. pl. 2, figs. 5, 5a.

43022. Acidaspis callicera Hall and Clarke. Plastotype. Onondaga (Dev.), Cayuga, Ontario, Canada.

Hall and Clarke, Nat. Hist. New York, Pal. VII, 1888, p. 69, pl. 16b, fig. 7.

43018. Acidaspis romingeri Hall and Clarke. Plastotype. Hamilton (Dev.). Little Traverse Bay, Michigan.

Hall and Clarke, Nat. Hist. New York, Pal. VII, 1888, p. 71, pl. 16b, figs. 15-18.

Oligocene. . Vendryes, Jamaica, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 313, pl. 28, fig. 9.

Oligocene. Vendryes, Jamaica, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 314, pl. 27, fig. 11.

9458. Aclis? stevensoni White. Cotypes. Upper Carboniferous. Coyote Creek, New Mexico.

White, U. S. Geogr. and Geol. Surv. W. of 100th Mer., III, suppl. 1881, p. xxxv, pl. 3, figs. 9a, b.

107073. Aclis? (Amblyspira) teres Guppy. Holotype.
Upper Oligocene. Pointapier, Trinidad, West Indies.
Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 314, pl. 28, fig. 6.

250. Acmæa occidentalis (Hall and Meek). Plesiotypes.
Fort Pierre (Cret.). Cheyenne River, near Black Hills,
South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 295, pl. 18, figs. 3a-c.

251. Acmæa? papillata (Meek and Hayden). Holotype. Fox Hills (Cret.). Fox Hills, North Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 296, pl. 21, figs. 4a, 4b. (On plate, Anisomyon patelliformis.)

See Capulus fragilis.

38209. Acridium oeningense Scudder. Cotypes.
Upper Miocene. Oeningen, Baden, Germany.
Scudder, Geol. Mag., Dec. IV, II, 1895, p. 118, pl. 6, fig. 2.

12514. Acrochordiceras hyatti Meek. Cotypes.
Triassic. New Pass, Desatoya Mountains, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 124, pl. 11, figs. 5, 5a.

20071. Acroloxus actinophorus White. Holotype. Eocene. Wales, Utah.

White, Bull. No. 34, U. S. Geol. Surv., 1886, p. 26, pl. 2, fig. 22.

2136. Acroloxus minutus (Meek and Hayden). Holotype.

Laramie (Cret.). Three miles below Fort Union, North

Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 543, pl. 44, fig. 10.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 451, pl. 24, fig. 27.

See Velletia (Ancylus) minuta.

24595. Acrothele? dichotoma Walcott. Holotype.
Upper Cambrian. Secret Canyon, Eureka District, Nevada.
Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 14, pl. 9, fig. 11.

15344. Acrothele subsidua (White). Plesiotypes.
 15345. Middle Cambrian. Antelope Springs, Utah, and Pioche,

15346. Nevada.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 108, pl. 9, figs. 4-4c; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 608, pl. 70, figs. 1-1c.

See Acrotreta? subsidua.

35265. Acrotreta argenta Walcott. Cotypes.

Upper Cambrian. Near Benders Pass, Silver Peak Range,
Nevada.

Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 580.

7867. Acrotreta attenuata Meek. Cotypes.

Middle Cambrian. Above Gallatin City, east side of Gallatin River, Montana.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 463, in a footnote.

[Listed as Acrotreta subconica Kutorga, but changed to A. attenuata Meek in a footnote.]

=Acrotreta gemma.

35266. Acrotreta concentrica Walcott. Cotypes.
Middle Cambrian. Between Dalton and Lafayette, Georgia.
Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 583.

35267. Acrotreta conula Walcott.

Cotypes.

Upper Cambrian. Oland, Sweden. Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 584.

35268. Acrotreta convexa Walcott. Cotypes. Upper Cambrian. Gillis Hill, Salmon River, near Marion Bridge, Cape Breton, Nova Scotia.

Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 584.

35269. Acrotreta curvata Walcott. Cotypes.
Upper Cambrian passage beds. Hamburgh Ridge,
Eureka District, Nevada.

Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 584.

Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 584.

35270. Acrotreta definita Walcott. Cotypes.
35271. Middle Cambrian and summit of Prospect Mountain limestone. Montpelier, Idaho; Prospect Mountain, Eureka District, Nevada.

15343. Acrotreta gemma Billings.

Plesiotypes.

Lower Cambrian. Pioche, Nevada.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 98, pl. 8, figs, I-1b; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 608, pl. 67, figs. 5-5e.

=Acrotreta primaæa.

24549. Acrotreta gemma Billings.

Plesiotypes.

Upper Cambrian. Eureka District, Nevada.

Walcott, Mon., VIII, U. S. Geol. Surv., 1884, p. 17, pl. 1, figs. 1a, 1b, 1d-1f; pl. 9, figs. 9, 9a.

See Acrotreta attenuata.

35216. Acrotreta gemma Billings.

Plesiotypes.

Flathead and Gallatin (Mid. and Up. Cambrian). Gallatin Range, Yellowstone National Park.

Walcott, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 449, pl. 62, figs. 2, 2a-e.

35272. Acrotreta gracia Walcott.

Cotypes.

Middle Cambrian. Hastings Cove, Kennebecasis River, St. John County, New Brunswick.

Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 586.

35273. Acrotreta idahoensis alta Walcott.

Cotypes.

35274. Middle Cambrian. Secret and New York canyons, Eureka District, Nevada.

Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 588.

35275. Acrotreta idahoensis sulcata Walcott.

Cotypes.

Middle Cambrian. Near Paris, Idaho.

Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 588.

35276. Acrotreta inflata Matthew.

Plesiotypes.

Middle Cambrian. Hanford Brook, New Brunswick.

Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 588.

35277. Acrotreta kutorgai Walcott.

Cotypes.

Middle Cambrian. Coosa Valley, near Gadsden and Chepultepec, Alabama.

Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 589.

35278. Acrotreta microscopica missouriensis Walcott. Cotypes.

35279. Middle Cambrian. St. Francois County, and near Potosi,

Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 590.

35280. Acrotreta microscopica tetonensis Walcott. Cotypes.

Middle Cambrian. Divide at head of Sheep Creek, Teton
Range, Wyoming.

Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 590.

35281. Acrotreta ophirensis Walcott. Cotypes.

Middle Cambrian. Ophir City, Utah.

Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 591.

35282. Acrotreta ophirensis rugosus Walcott. Cotypes.
Middle Cambrian. Ophir City, Utah.
Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 592.

35283. Acrotreta parvula Wallerius. Plesiotype.
Middle Cambrian. Borgholm, Oland, Sweden.
Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 592.

15343. Acrotreta primaæa Walcott. Cotypes.
Lower Cambrian. Pioche, Nevada.
Walcott, Proc. U. S. Nat. Mus.. XXV, 1902, p. 593.

See Acrotreta gemma.

8570. Acrotreta pyxidicula White. Cotypes. Upper Cambrian. Schellbourne. Schell Creek Range, Nevada.

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 8 vo., 1874. p. 9; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I 1877. p. 53. pl. 3. figs. 3a-3d.

35284. Acrotreta sagittalis magna Matthew. Plesiotypes.
Middle Cambrian. Hastings Cove, Kennebecasis River,
St. John County, New Brunswick.
Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 595.

35285. Acrotreta signalis Walcott. Cotypes.

Middle Cambrian. St. Croix Falls, Wisconsin.

Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 599.

35286. Acrotreta socialis v. Seebach. Plesiotypes-Middle Cambrian. Oland, Island of Borgholm, Sweden. Walcott, Proc. U. S. Nat. Mus. XXV, 1902, p. 599.

8575. Acrotreta? subsidua White. Cotypes. 15345. Middle and Lower Cambrian. Antelope Spring, House 15346. Range. Utah.

White, Prelim. Rept., U. S. Geogr, Surv. W. 100th Merid., 8 vo., 1874. p. 6;
Rept. U. S. Geogr, Surv. W. 100th Merid., IV, Pt. I. 1877. p. 34. pl. 1, figs. 3-3d.—Walcott, Bull. No. 30, U. S. Geol. Surv., 1886. p. 108. pl. 9, figs. 4-4c;
Tenth Ann. Rept. U. S. Geol. Surv., 1880. p. 668, pl. 70, figs. 1-1c.

= Acrothele subsidua.

285. Actæon Solidula attenuata Meek and Hayden. Holotype.

Montana Cret Vellowstone River, near Miles City,

Montana

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., 1858, p. 54.

# Actaon attenuatus.

285. Actæon attenuatus (Meek and Hayden). Holotype.

Montana (Cret.). Yellowstone River, near Miles City,
Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 281, pl. 19. figs. 17a, 17b.

See Actæon (Solidula) attenuata.

113860. Actæon chipolanus Dall.

Cotypes.

Chipola (Oligocene). One mile below Bailey's Ferry, Calhoun County, Florida.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 23; Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pk. 59, fig. 11.

Cotypes. Chipola (Oligocene). One mile below Bailey's Ferry, Calhoun County, Florida.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 23; Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 59, fig. 3.

20113. Actæon inornatus White. Cotypes.

Chico (Cret.). Near Pence's Ranch, Butte County, California.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 15, pl. 4, figs. 16-18.

113110. Actæon myakkanus Dall.

Holotype.

Pliocene. Myakka River, Florida.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 24; Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 59, fig. 1.

22931. Actæon propinquus Stanton.

Cotypes.

Colorado (Cret.). Poison Canyon, Huerfano Park, Colorado.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 161, pl. 34, figs. 5-8.

148265 Actæon punctocælatus coronadoensis Stearns. Cotypes. to Quaternary. Spanish Bight, San Diego, California.

148270. Stearns, Proc. U. S. Nat. Mus., XXI, 1898, p. 299.

111627. Actæon shilohensis Whitfield.

Cotype.

Miocene. Shiloh, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 137, pl. 24, figs. 15-17.

283. Actæon subellipticus Meek and Hayden. Holotype.
Fort Pierre (Cret.). Crow Creek, near Black Hills, South
Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 63.— Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 280, pl. 19, fig. 16.

148241. Actæon traskii Stearns.

Cotv

Quaternary. Spanish Bight, San Diego, California.

Stearns, Proc. U. S. Nat. Mus., XXI, 1898, p. 297, fig. on 1

8096. Actæon woosteri White.

Cotypes.

Fox Hills (Cret.). Confluence of the St. Vrains with South Platte, northern Colorado.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1877 (1879), p. 304, pl. 7, figs. 9a-c.

8095. Actæonina prosocheila White.

Holotype.

Fox Hills (Cret.). Confluence of the St. Vrains with South Platte, northern Colorado.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1877 (1879), p. 305, pl. 7, figs. 10a, 10b.

Actinocrinites. See Actinocrinus.

39892. Actinocrinus agassizii Troost.

Chirotypes.

Mississippian. White Creek Spring, Davidson County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 60.

39891. Actinocrinus cornutus Troost.

Chirotypes.

Mississippian. White Creek Spring, Davidson County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 60.

39897. Actinocrinus fibula Troost.

Chirotypes.

39898. Mississippian. White Creek Spring, Davidson County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., H, 1850, p. 60.

39892. Actinocrinus gibbosus Troost.

Chirotype.

Mississippian. White Creek Spring, Davidson County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 60.

39900. Actinocrinus humboldti Troost.

Chirotypes.

Mississippian. White Creek Spring, Davidson County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 60.

39903. Actinocrinus moniliformis Miller.

Chirotype.

Mississippian. Near Clarksville, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 60.

39902. Actinocrinus mortoni Troost.

Chirotypes.

Mississippian. Near Huntsville, Alabama.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 60.

39894. Actinocrinus nashvillæ Troost.

Chirotypes.

Mississippian. White Creek Spring, Davidson County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 60.

39896. Actinocrinus urna Troost. Chirotype.

Mississippian. White Creek Spring, Davidson County,
Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 60.

8525. Actinocrinus viaticus White. Holotype.
Mississippian. Mountain Spring, Old Mormon Road,
Nevada.

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 8 vo., 1874, p. 16; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1877, p. 82, pl. 5, fig. 1.

46338. Actinomya cancellata (Walcott)?. Plesiotypes. Trenton (Ord.). West Covington, Kentucky.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 657, text figs. a, b.

= Whiteavesia cancellata.

13881. Actinopteria boydi (Conrad). Plesiotype.
Middle Devonian. Lone Mountain, near Eureka, Nevada.
Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 166, pl. 5, fig. 2.

46545. Actinostroma? trentonense Ulrich and Everett. Figured sections of holotype.

Stones River (Ord.). Dixon, Illinois.

Ulrich and Everett. Geol. Surv. Ill., VIII, 1890, p. 282, pl. 7,

43410. Actinotrypa peculiaris Rominger. Plesiotypes and figured sections.

Keokuk (Miss.). Keokuk, Iowa.

figs. 3a, 3b.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 503, pl. 77, figs. 3-3b.

Miocene. Duplin County, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 346.

113596. Adeorbis strigillatus Dall. Cotypes.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 345, pl. 19, figs. 10, 10b.

38143. Adiphlebia lacoana Scudder. Holotype. Upper Coal Measures. Mazon Creek, Grundy County, Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1885, p. 345, pl. 32, fig. 6; Foss. Insects N. America, I, 1890, pl. 18, fig. 6.

162555. Admete gracilior Carpenter. Plesiotype.
Pleistocene. Deadman Island, off San Pedro, California.

Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 219, pl. 7, fig. 4.

8651. Admete (Admetopsis) gregaria Meek. Plesiotypes.
Colorado (Cret.). North fork of Virgin River, Utah.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 198, pl. 18, figs. 5a, b.

= Admetopsis subfusiformis.

7894. Admete? (Admetopsis) gregaria Meek. Cotypes. Colorado (Cret.). Coalville, Utah.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 (1873), p. 501.

= Admetopsis rhomboides.

7893. Admete? (Admetopsis) rhomboides Meek. Cotypes. Colorado (Cret.). Coalville, Utah.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 (1873), p. 501.

= Admetopsis rhomboides.

7892. Admete? (Admetopsis) subfusiformis Meek. Cotypes. Colorado (Cret.). Coalville, Utah.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 (1873), p. 502.

= Admetopsis subfusiformis.

22925. Admetopsis humerosa Stanton. Cotypes.

Colorado (Cret.). Near Iron City, Utah.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 160, pl. 33, figs. 4, 5.

7893. Admetopsis rhomboides (Meek). Cotypes. 7894. Colorado (Cret.). Coalville, Utah.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1877 (1879),
p. 317, pl. 9, figs. 6a, 6b.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 158, pl. 33, fig. 3.

See Admete? gregaria, and A.? rhomboides.

7892. Admetopsis subfusiformis (Meek). Cotypes.

8651. Colorado (Cret.). Coalville, Utah.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1877 (1879),
p. 318, pl. 9, fig. 7a.—Stanton, Bull. No. 106, U. S. Geol. Surv.,
1893, p. 159, pl. 33, figs. 1, 2.

See Admete (Admetopsis) gregaria, and A.? subfusiformis.

41372. Æchmina abnormis Ulrich. Holotype.

Rochester (Sil.). Lockport, New York.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 183, pl. 12, figs. 7a, b.

41371. Æchmina marginata Ulrich. Holotype.

Hamilton (Dev.). Eighteen Mile Creek, near Buffalo, New York.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 184, pl. 16, fig. 5. 38147. **Aethophlebia singularis** Scudder. Holotype. Upper Coal Measures. Mazon Creek, Grundy County, Illinois.

Scudder Mem. Boston Soc. Nat. Hist. III, 1885, p. 338, pl. 31, fig. 9; Foss. Insects N. America, I, 1890, p. 302, pl. 17, fig. 9.

39889. Agaricocrinites tuberosus Troost. Chirotypes.

Mississippian. White Creek Spring, Davidson County,
Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 60.

115407. Agassizia clevei Cotteau.

Cotypes.

Eccene. St. Bartholomew, West Indies.

Cotteau, Kongl. Svenska Vet-Akad. Hand., XIII, 6, 1874, p. 33, pl. 6, figs. 2-10.

Agassizocrinites. See Agassizocrinus.

17937. Agassizocrinus conicus Owen and Shumard. Plesiotype. Kaskaskia (Miss.). Chester, Illinois.

Owen, Rept. Geol. Surv., Wis., Iowa, and Minn., 1852, p. 597, tab. v B, fig. 6.

39918. Agassizocrinus dactyliformis Troost. Chirotypes.
Mississippian. Near Huntsville, Alabama.

Troost., Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 62.

39917. Agassizocrinus gracilis Troost. Chirotype.
Mississippian. Near Huntsville, Alabama.
Troost., Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 62.

27199. Agathiceras ciscoense Smith. Holotype. Upper Coal Measures. Graham, Young County, Texas. Smith, Mon. XLII, U. S. Geol. Surv., 1903, p. 131, pl. 21, figs. 17-19.

33064. Agelacrinites hamiltonensis Vanuxem. Plastotype. Hamilton (Dev.). Hamilton, Madison County, New York.

Vanuxem, Geol. N. Y.; Rept. Third Dist., 1842, p. 158.—Hall,
Twenty-fourth Rept. N. Y. State Mus. Nat. Hist., pl. 6, figs.

40744. Agelacrinites holbrooki James. Plesiotype. Lorraine (Ord.). Morrow, Ohio.

Clarke, Bull. No. 49, N. Y. State Museum, 1901 (1902), p. 189, fig. 2.

= Lepidodiscus holbrooki.

14, 15.

7860. Agnostus bidens Meek. Cotypes. Middle Cambrian. Above Gallatin City, east side of Gallatin River, Montana.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 (18 463, and footnote.

24638. Agnostus bidens Meek. Plesiotype. Upper Cambrian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 26, pl. 9, figs. 13, 13a.

35222. Agnostus bidens Meek. Plesiotypes.
Flathead (Mid. Cambrian). Gallatin Range, Yellowstone
National Park.

Walcott, Mon. XXXII, U. S. Geol. Surv., Pt. II, 1899, p. 455, pl. 63, figs. 4, 4a.

24557. Agnostus communis Hall and Whitfield. Holotype. Upper Cambrian. White Pine District, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 228, pl. 1, figs. 28, 29.—Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 27.

18327. Agnostus desideratus Walcott. Holotype.

Lower Cambrian. Near Salem, Washington County,
New York.

Walcott, Proc. U. S. Nat. Mus., XII, 1889, p. 39; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 629, pl. 80, fig. 5.

8578. Agnostus interstrictus White. Cotypes. 15405. Middle Cambrian. Antelope Spring, House Range, Utah.

White, Prelim. Rep. Geogr. and Geol. Exped., West 100th Merid., 1874, p. 7; Rep. U. S. Geogr. Surv. West 100th Merid., IV, Pt. I, 1877, p. 38, pl. 2, figs. 5a, 5b.—Walcott, Bull. U. S. Geol. Surv., No. 30, 1886, p. 149, pl. 16, figs. 6, 6a; Mon. XXXII, U. S. Geol. Surv., Pt. II, 1899, p. 454, pl. 63, fig. 3.

35221. Agnostus interstrictus White. Plesiotype. Flathead (Mid. Cambrian). Gallatin Range, Yellowstone National Park.

Walcott, Mon. XXXII, U. S. Geol. Surv., Pt. II, p. 454, pl. 63, fig. 3a.

24597. Agnostus maladensis Meek. Cotypes. Upper Cambrian. Near Malade City, Northern Utah.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 (1873), p. 464, and footnote.

[Listed as A. josepha Hall?, but changed to A. maladensis Meek in a footnote.]

24639. Agnostus neon Hall and Whitfield. Holotype.
Upper Cambrian. Eureka District, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 229, pl. 1, figs. 26, 27.

24637. Agnostus prolongus Hall and Whitfield. Holotype.
Upper Cambrian. Eureka, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 230, pl. 1, figs. 30, 31.

24585. Agnostus richmondensis Walcott. Cotype.
Middle Cambrian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 24, pl. 9, fig. 10.

24586. **Agnostus seclusus** Walcott. Cotype. Upper Cambrian. Secret Canyon, Eureka District, Nevada. Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 25, pl. 9, fig. 14.

24558. Agnostus tumidosus Hall and Whitfield. Holotype. Upper Cambrian. Eureka, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 231, pl. 1, fig. 32.

35223. Agnostus tumidosus Hall and Whitfield. Plesiotypes.
Flathead (Mid. Cambrian). Gallatin Range, Yellowstone
National Park.

Walcott, Mon. XXXII, U. S. Geol. Surv., Pt. II, 1899, p. 455, pl. 63, figs. 5, 5a.

24559. **Agraulos ? globosus** Walcott. Cotype. Upper Cambrian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 61, pl. 9, fig. 23.

1180. Agraulos oweni (Meek and Hayden). Cotypes.

Upper Cambrian. Near head of Powder River, Big Horn
Mountains, Wyoming.

Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 9, text figs. a-c.

=Ptychoparia oweni.

See Arionellus (Crepicephalus) oweni.

23839. Agraulos redpathi Walcott. Plastotype. Lower Cambrian. St. Simon, Quebec, Canada.

Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 654, fig. 69b on p. 655.

23863. Agraulos saratogensis Walcott. Cotypes.

Upper Cambrian. Four miles west of Saratoga Springs,

New York.

Walcott, Proc. U. S. Nat. Mus., XIII, 1890, p. 276, pl. 21, fig. 14.

18334. Agraulos strenuus Billings. Plesiotype. Lower Cambrian. Conception Bay, Newfoundland.

Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 653, pl. 97,

figs. 1-1c.

18335. Agraulos strenuus nasutus Walcott. Cotype. Lower Cambrian. Conception Bay, Newfoundland. Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 654, pl. 97, figs. 2-2c.

23864. Agraulos? thea Walcott. Holotype. Upper Cambrian. Osceola Mills, Wisconsin. Walcott, Proc. U. S. Nat. Mus., XIII, 1890, p. 277, pl. 21, fig. 15.

20134. Aguileria cumminsi White. Cotypes. Woodbine (Cret.). Four miles south of Lewisville, Den County, Texas.

White, Proc. Acad. Nat. Sci. Phila., for 1887, p. 37, pl. 2, 1-3.

12331. Akera glansoryza Whitfield. Holotype. Fort Pièrre (Cret.). Cheyenne River, near French Creek,

Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills, Dakota, 1880, p. 437, pl. 12, fig. 25.

113384. Alaba chipolana Dall. Holotype. Oligocene. Chipola River, Calhoun County, Florida.

Dall. Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 292, pl. 21, fig. 9.

107128. Alaba turrita Guppy.

Holotype.

Oligocene. Vendryes, Jamaica, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 321, pl. 27, fig. 7.

158010. Aldrichia elegans Vaughan.

Cotypes.

Jacksonian (Eocene). Jackson, Mississippi.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 71, pl. 4, figs. 15, 16, 17a, 19.

144173. Aligena æquata Conrad.

Plesiotypes.

Miocene. St. Marys River, Maryland.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1175, pl. 24, figs. 8-8b.

162529. Aligena cerritensis Arnold.

Holotype.

Pleistocene. Los Cerritos, California.

Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 138, pl. 13, fig. 3.

135867. Aligena lineata Dall.

Holotype.

Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1176, pl. 44, fig. 23.

115110. Aligena minor Dall.

Holotype.

Miocene. Natural Well, Duplin County, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1177, pl. 44, fig. 8.

135868. Aligena pustulosa Dall.

Holotype.

Upper Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst Sci. Phila., III, Pt. V, 1900, p. 1176, pl. 33, figs. 18, 22.

Allerisma. See Allorisma.

46078. Allodesma subellipticum (Ulrich). Holotype and plesiotype.

Trenton (Ord.). Near Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 617, pl. 42, figs. 9-14.

See Modiolopsis subelliptica.

43126. Allonema botelloides Ulrich and Bassler. Cotypes.

Silurian. Island of Gotland.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLV, 1904, p. 281, pl. 67, figs. 2-4.

43125. Allonema botellus (Vine).

Plesiotype.

Silurian. Island of Gotland.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLV, 1905, p. 281, pl. 67, fig. 1.

43129. Allonema fusiforme (Nicholson and Etheridge). Plesiotype. Hamilton (Dev.). Alpena, Michigan.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLV, 1904, p. 284, pl. 67. fig. 8.

43124. Allonema? minimum Ulrich and Bassler. Holotype. Upper Coal Measures. Springfield, Illinois.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLV, 1904, p. 284, pl. 67, figs. 10-12.

43131. Allonema moniliforme aggregatum Ulrich and Bassler.

Holotype.

Hamilton (Dev.). Genesee County, New York.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLV, 1904, p. 282, pl. 67, fig. 9.

43127. Allonema subfusiforme Ulrich and Bassler. Holotype. Silurian. Island of Gotland.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLV, 1904, p. 283, pl. 67, figs. 6, 7.

43128. Allonema waldronense Ulrich and Bassler. Holotype. Waldron (Sil.). Waldron, Indiana.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLV, p. 283, pl. 67, fig. 5.

46079. Allonychia jamesi (Meek).

Plesiotype.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 641, pl. 48, fig. 7.

46080. Allonychia ovata Ulrich.

Holotype.

Lorraine (Ord.). Covington, Kentucky.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 641, pl. 48, figs. 4-6.

46081. Allonychia subrotunda Ulrich.

Holotype.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 642, pl. 48, figs. 8, 9.

1021. Allorisma? altirostrata Meek and Hayden. Holotype. Upper Carboniferous. Juniata, Kansas.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1858, p.

=Sedgwickia? altirostrata.

1018. Allorisma? cooperi (Meek and Hayden). Holotype. Upper Carboniferous. Near Helena, Kansas.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., 1858, p. 264.

=Chænomya cooperi.

See Panopæa cooperi.

6489. Allorisma (Sedgwickia) geinitzii Meek. Cotypes. Upper Carboniferous. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Neb. (Hayden), 1872, p. 219, pl. 10, figs. 16a, 16b.

8232. Allorisma? gilberti White. Holotype. Upper Carboniferous. Wild Band Pockets, Arizona.

White, Bull. No. 5, U. S. Geol. Surv. Terr., 1879, p. 217; Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1878 (1883), p. 137, pl. 33, figs. 9a, 9b.

6761. Allorisma (Sedgwickia) granosa (Shumard). Holotype. Upper Carboniferous. Rock Bluff, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Neb. (Hayden), 1872, p. 220, pl. 2, figs. 8a-8b.

46758. Allorisma (Chænomya?) hybrida (Meek and Worthen).
Plastotype.

Keokuk (Miss.). Warsaw, Illinois.

Meek and Worthen, Geol. Surv. Ill., III, 1868, p. 538, pl. 19, fig. 3a.

46082. Allorisma illinoisensis Worthen. Keokuk (Miss.). Warsaw, Illinois.

Plastotype.

Worthen, Ill. State Mus. Bull. No. 2, 1884, p. 11.

1019. Allorisma? leavenworthana Meek and Hayden. Cotypes. Upper Carboniferous. Leavenworth, Kansas.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., 1858, p. 263. = Chænomya leavenworthana.

9286. Allorisma marionensis White.

Cotype.

St. Louis (Miss.). Marion County, Iowa.

White, Proc. Acad. Nat. Sci. Phila., 1876, p. 31; Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883), Pt. I, p. 167, pl. 41, figs. 3a, 3b.

6513. Allorisma (Sedgwickia) reflexa Meek. Cotypes. Upper Carboniferous. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Neb. (Hayden), 1872, p. 217, pl. 10, fig. 15.

17017. Allorisma regularis King? Plesiotype.

Upper Carboniferous, Wayne City, Iowa.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, tab. V, fig. 13.

= Allorisma subcuneata.

1020. Allorisma subcuneata Meek and Hayden. Cotypes. Upper Carboniferous. Leavenworth, Kansas.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., 1858, p. 263; Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 37, pl. 1, figs. 10a, 10b.

See Allorisma regularis.

6608. Allorisma subcuneata Meek and Hayden. Cotypes. Upper Carboniferous. Rock Bluff, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Nebraska, 1872, p. 221, pl. 2, figs. 10a, 10b:—White, Thirteenth Ann. Rept. Geol. Surv. Indiana, p. 148, pl. 31, figs. 1-3.

8481. Allorisma subcuneata Meek and Hayden var. Plesiotype.
Upper Carboniferous. Near Agua Azul, New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 155, pl. 12, figs. 7a, 7b.

6501. Allorisma (Sedgwickia?) subelegans Meek. Holotype. Upper Carboniferous. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Neb. (Hayden), 1872, p. 220, pl. 10, fig. 14.

35301. Allorisma terminale Hall.

Plesiotypes.

Rico (Upper Carb.). Scotch Creek, Rico Quadrangle, Colorado.

Girty, Prof. Pap. 16, U. S. Geol. Surv., 1903, p. 437, pl. 9, figs. 4, 5, 6.

15072. Allorisma terminalis Hall.

Holotype.

Upper Carboniferous. Big Blue River, Kansas.

Hall, Stansbury's Expl. and Surv. Valley Great Salt Lake, Utah, 1852, p. 413, pl. 2, figs. 4a, 4b.

114658. Alveinus rotundus Dall.

Cotypes.

Oligocene. Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1167, pl. 45, figs. 25, 28.

14562. Alveolites multilamella Meek.

Cotypes.

Upper Devonian. Argyle Hill, White Pine District, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 25, pl. 2, figs. 7-7b.

14554. Alveolites vallorum Meek.

Cotypes.

Base of Upper Devonian. Ramparts of the Mackenzie River, Canada.

Meek, Trans. Chicago Acad. Sci., I, 1868, p. 86, pl. 11, fig. 9.

112603. Amalthea willcoxii Dall.

Holotype.

Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p 359, pl. 17, fig. 6. 22013. Amauropsis bulbiformis (Sowerby). Plesiotypes. Colorado (Cret.). Huerfano Park, Colorado.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 137, pl. 30, figs. 2-4.

268. Amauropsis paludinæformis (Hall and Meek). Plesiotypes. Fort Pierre (Cret.). Cheyenne River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 318, pl. 19, figs. 15a-c.

12302. Amauropsis paludinæformis (Hall and Meek). Plesiotypes.

Fort Pierre (Cret.). Cheyenne River, near Box Elder

Creek, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills, Dakota, 1880, p. 431, pl. 12, fig. 16.

8068. Amauropsis? utahensis (White).

Cotypes.

Colorado (Cret.). Coalville, Utah.

Stanton, Bull. No. 106, U.S. Geol. Surv., 1893, p. 138, pl. 30, fig.1. See Lunatia utahensis and Euspira utahensis.

23074. Amberleya dilleri Stanton. Cotypes.

Kno.cville (Lower Cret.). Three miles northwest of Paskenta, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 68, pl. 12, figs. 7-9.

45083. Ambonychia affinis Ulrich.

Cotype.

Trenton Ord.). Carroll County, Illinois.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1804, p. 402, pl. 35, figs. 5, 6.

42085. Ambonychia amygdalina Hall. Plesiotype.
Trenton Ord. Thirteen miles south of Cannon Falls,
Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1804, p. 403, pl. 35, figs. 8, 9.

45584. Ambonychia bellistriata Hall. Plesiotype. Trenton (Ord.). Near Wykoff, Minnesota.

Ulrich, Geol. and Nat. Hist, Surv. Minn., Final Rept., III, Pt. II, 1844, p. 462, pl. 35, figs. 1, 2.

4888. Ambonychia planistriata Hall. Plesiotype. Stones River Ord. Mineral Point, Wisconsin.

Urich, Gool, and Nat. Hist, Surv. Minn., Final Rept., III, Pt. II, 1842, p. 481, pl. 38, figs. 5, 4.

40010. Ambonychia superba Billings. Plastotype.
Anticosti Sil . Junction Cliff, Island of Anticosti.
Billings, Cat. Sil. Foss. Anticosti, 1806, p. 49, fig. 16.

381. Ammonites complexus Hall and Meek. Plesiotypes.
Fort Pierre (Cret.). Great Bend of the Missouri, below
Fort Pierre, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1875, p. 447, pl. 24, figs. 1a-c.

= Pachydiscus complexus.

1276. Ammonites complexus suciaensis Meek. Cotypes.
12396. Nanaimo (Cret.). Sucia Island, and Komooks, Vancouver Island.

Meek, Proc. Acad. Nat. Sci. Phila., for 1861, p. 317; Bull. U. S. Geol. and Geogr. Surv. Terr., II, No. 4, 1876, p. 369, pl. 5, figs. 2a-c.

= Pachydiscus suciaensis.

203. Ammonites cordiformis Meek and Hayden. Cotypes.

Jurassic. Black Hills, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1858, p. 57; Pal. Upper Mo., Smithsonian Cont. to Knowl. No. 172, XIV, 1864, p. 122, pl. 5, figs. 2a-e.

= Cardioceras cordiforme.

12345. Ammonites cordiformis Meek and Hayden. Plesiotypes. 12294. Jurassic. Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills, Dakota, 1880, p. 378, pl. 6, figs. 20-23.

= Cardioceras cordiforme.

12308. Ammonites cordiformis distans Whitfield. Holotype.

Jurassic. Two miles south of Belle Fourche River, near
Bear Lodge Butte, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills, Dakota, 1880, p. 380, pl. 6, fig. 25.

= Cardioceras cordiforme distans.

384. Ammonites halli Meek and Hayden. Holotype.
Fort Pierre (Cret.). Missouri River, 150 miles above mouth of Milk River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 70. = Phylloceras? halli.

314. Ammonites henryi Meek and Hayden. Holotype. Jurassic. Southwest part of Black Hills, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1858, p. 57; Pal. Upper Mo., Smithsonian Cont. to Knowl. No. 172, XIV, 1864, p. 123, pl. 4, figs. 9a-c.

20109. Ammonites (Lillia) howelli White. Cotypes.

Jurassic. Wrangell Bay, Alaska.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 68, pl. 12, figs. 1, 2; pl. 14, figs. 1-3.

20086. Ammonites (Lillia) kialagvikensis White. Cotypes.

Jurassic. Wrangell Bay, Alaska.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 69, pl. 13, fig. 7.

9878. Ammonites leonensis Conrad. Holotype.

Washita (Lower Cret.). Leon Springs, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. 2, 1857, p. 160, pl. 16, figs. 2a, 2b.

=Schloenbachia leonensis.

8629. Ammonites lœvianus White. Holotype. Colorado (Cret.). Ojo de los Cuervos, New Mexico.

White, Rept. U. S. Geogr. Surv., W. 100th merid., IV, Pt. I, 1876, p. 201, pl. 19, figs. 1a, b.

= Prionotropis lœvianus.

20085. Ammonites maclurei White. Holotype. Nanaimo (Cret.). Sucia Island, Gulf of Georgia.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 48, pl. 7, figs. 2, 3.

20243. Ammonites? mandanensis Morton. Plesiotype

Fox Hills (Cret.). Fox Hills between Cheyenne and Moreau Rivers, South Dakota.

Owen, Rept. Geol. Surv., Wis., Iowa and Minn., 1852, pl. 7, fig. 5.

=Scaphites mandanensis.

20244. Ammonites moreauensis Owen.

Holotype.

Cretaceous. Fox Hills, South Dakota.

Owen, Rept. Geol. Surv., Wis., Iowa, and Minn., 1852, p. 579, pl. 8, fig. 7.

=Scaphites cheyennensis.

1924. Ammonites? mullananus Meek and Hayden. Holotype.
Fort Benton (Cret.). Chippewa Point, near Fort Benton,
Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., 1862, p. 23.— Meek, Ninth Ann. Rept. U. S. Geol. Surv. Terr., 1876, p. 607, pl. 8, figs. 1a-c.

=Scaphites mullananus.

20242. Ammonites nebrascensis Owen.

Cotype.

Cretaceous. Fox Hills, South Dakota.

Owen, Rept. Geol. Surv., Wis., Iowa, and Minn., 1852, p. 577, pl. 8, figs. 3, 3a.

=Scaphites conradi.

12304. Ammonites newberryanus Meek.

Holotype.

Nanaimo (Cret.). Nanaimo, Vancouver Island.

Meek, Trans. Albany Inst., IV, 1857, p. 47; Bull, U. S. Geol, and Geogr. Surv. Terr., II, No. 4, 1876, p. 367, pl. 4, figs. 3, a, b.

= Pachydiscus newberryanus.

3582. Ammonites pickeringi Dana. Holotype.

Jurassic. At an elevation of 16,000 feet on the route to
Sierra de Pasco, Andes, South America.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 721, pl. 15, fig. 5.

369. Ammonites placenta intercalaris Meek and Hayden.

Holotype.

Fort Pierre (Cret.). Cheyenne River at mouth of Sage Creek, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., 1860, p. 177.

= Placenticeras placenta intercalare.

9888. Ammonites pleurisepta Conrad. Cotypes.

Cretaceous. Three miles below Laredo, Texas. [Locality erroneous.]

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. 2, 1857, p. 159, pl. 15, figs. 1a-c.

=Sphenodiscus pleurisepta.

12451. Ammonites (Scaphites?) ramosus Meek. Holotype.
Nanaimo (Cret.). Nanaimo, Vancouver Island.

Meek, Trans. Albany Inst., IV, 1857, p. 45.

= Phylloceras? ramosum.

7729. Ammonites serrato-carinatus Meek. Cotypes.

Colorada (Cret.). Medicine Bow River, Wyoming.

Meek, Proc. Am. Philos. Soc., XI, 1871, p. 429.

= Prionocyclus wyomingensis.

9893. Ammonites texanus Roemer.

Plesiotype.

Washita (Lower Cret.). Near Puercos [Pecos] River, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. 2, 1857, p. 159.

=Schloenbachia leonensis.

20121. Ammonites turneri White.

Holotype.

Chico (Cret.). Cury's Canada, South of Mount Diablo, California.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 26, pl. 5, figs. 1, 2.

=Acanthoceras turneri.

1342. Ammonites vancouverensis Meek.

Holotype.

Nanaimo (Cret.). Komooks, Vancouver Island.

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Meek, Proc. Acad. Nat. Sci. Phila., 1861, p. 317.

= Placenticeras? vancouverense.

224. Ammonites vermilionensis Meek and Hayden. Holotype.
Colorado (Cret.). Mouth of Vermilion River, South
Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., 1860, p. 177.

= Mortoniceras? vermilionense.

20110. Ammonites (Amaltheus) whiteavesii White. Cotypes.
Jurassic. Wrangell Bay, Alaska.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 69, pl. 13, figs. 1-5.

28949. Amnicola? cretacea Stanton. Cotypes.

Dakota? (Cret.). Fawn Creek, Yellowstone National
Park.

Stanton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 633, pl. 75, fig. 8.

113565. Amnicola floridana convexa Pilsbry. Plesiotypes.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Pilsbry, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 338.

113567. Amnicola omphalotropis Pilsbry. Holotype.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Pilsbry, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 339, pl. 21, fig. 13.

111588. Amphidesma burnsi Whitfield.

Cotype.

Miocene. Shiloh, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 79, pl. 14, figs. 16-18.

=Semele burnsi. See Abra æqualis.

158260. Amphihelia natchitochensis Vaughan. Cotypes.
Lower Claiborne. Natchitoches, Louisiana.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 124, pl. 12, figs. 12-18.

24645. Amphion nevadensis Walcott. Cotypes.
Upper Pogonip (Ord.). Bellevue Peak, Eureka District,
Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 94, pl. 12, fig. 13.

162550. Amphissa ventricosa Arnold. Holotype.
Pleistocene. Deadman Island, off San Pedro, California.
Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 242, pl. 5, fig. 11.

43769. Amplexopora affinis Ulrich. Figured sections of holotype. Richmond (Ord.). Wilmington, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 450, pl. 36, fig. 2a. = Heterotrypa affinis.

42313. Amplexopora ampla Ulrich and Bassler. Cotypes and figured section.

Lorraine (Ord.). Nashville, Tennessee.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 42, pl. 13, figs. 7, 8; pl. 14, fig. 3.

43641. Amplexopora cingulata Ulrich. Cotypes and figured sections. Lorraine (Ord.). McKinney's Station, Kentucky.

Ulrich, Journ, Cincinnati Soc. Nat. Hist., V, 1882, p. 254, pl. 11, figs. 5-5c.

43211. Amplexopora columbiana Ulrich and Bassler. Cotypes and figured sections.

Lorraine (Ord.). Columbia, Tennessee.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 41, pl. 13, figs. 1-3.

43216. Amplexopora cylindracea Ulrich and Bassler. Cotypes and figured sections.

Trenton (Ord.). Nashville, Tennessee.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 43, pl. 13, figs. 5, 6; pl. 14, figs. 4, 5.

44070. Amplexopora filiosa (D'Orbigny). Plesiotypes and figured sections.

Lorraine (Ord.). Hamilton, Ohio.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 41, pl. 12, figs. 10, 11.

See Leptotrypa filiosa.

44069. Amplexopora pustulosa Ulrich.

Cotypes and figured sections.

Richmond (Ord.), Hanover, Ohio.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 451, pl. 36, figs. 3-3e.

43640. Amplexopora robusta Ulrich.

Holotype and figured sections.

Lorraine (Ord.), Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 82, pl. 1, figs. 1-1b.

43815. Amplexopora winchelli Ulrich. Cotypes.
Black River (Ord.), Minneapolis, Minnesota.

Ulrich, 14th Ann. Rept. Geol. Nat. Hist. Surv. Minn., 1886, p. 91. = Batostoma winchelli.

8064. Amplexus zaphrentiformis White. Cotype.

Lower Aubry (Upper Carb.), Split Mountain Canyon and near Echo Park, Green River, Utah.

White, Rept. Geol. Uinta Mts. (Powell), 1876, p. 107; Twelfth Ann. Rept. U. S. Geol. Surv. Terrs., 1878 (1883), Pt. I, p. 120, pl. 33, figs. 1a-1d.

Oligocene. Near Baileys Ferry, Chipola River, Flor Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892 pl. 22, fig. 36. 112933. Ampullina solidula Dall. Holotype.

Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 376, pl. 22, fig. 31.

7831. Amussium aurarium Meek. Holotype.

Jurassic. Mariposa Estate, California.

Meek, Geol. Surv. Calif., Geology, I, 1865, p. 478, pl. 1, figs. 6a.

38001. Amynilyspes wortheni Scudder. Cotypes.

Upper Coal Measures. Mazon Creek, Grundy County, Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1882, p. 178, pl. 13, figs. 1-4, 9; Foss. Insects N. America, I, 1890, p. 230, pl. 10, figs. 1-4, 9.

112145. Anachis avara amydra Dall. Cotypes.

Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 136.

112144. Anachis avara caloosaensis Dall. Cotypes.

Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 135.

112146. Anachis camax Dall. Holotype

Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 136, pl. 12, fig. 3.

113258. Anachis harrisii Dall. Holotype.

Miocene. Yorktown, Virginia.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, pl. 22, fig. 22.

112147. Anachis ithitoma Dall. Holotype.

Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 136, pl. 12, fig. 6.

43218. Anaphragma mirabile Ulrich and Bassler. Cotypes and figured sections.

Richmond (Ord.). Wilmington, Illinois.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 40, pl. 13, figs. 9-11.

30237. Anatina austinensis Shattuck. Holotype.

Buda - Low, Cret. -. Shoal Creek, Austin, Texas.

Shattuck, Bull. No. 205, U. S. Geol. Surv., 1903, p. 29, pl. 18, figs. 1, 2.

22896. Anatina lineata Stanton. Cotypes.

Colorado (Cret.). Huerfano Park, Colorado.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 117, pl. 26, figs. 3, 4.

28945. Anatina (Cercomya) punctata Stanton. Holotype and paratypes.

Jurassic. Yellowstone National Park.

Stanton, Mon. XXXII, U. S. Geol. Surv., Pt. II, 1899, p. 628, pl. 74, fig. 5.

20091. Anatina sulcatina Shumard? Plesiotypes. Nanaimo (Cret.). Sucia Island, Gulf of Georgia.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 43, pl. 6, fig. 1.

30238. Anatina texana Shattuck. Holotype. Buda (Low. Cret.). Shoal Creek, Austin, Texas.

Shattuck, Bull. No. 205, U. S. Geol. Surv., 1903, p. 30, pl. 18, fig. 3.

274. Anchura (Drepanochilus) americana (Evans and Shumard).
Plesiotypes.

Fort Pierre or Fox Hills (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1875 (1877), p. 325, pl. 32, figs. 8a, 8b.

12429. Anchura? fusiformis Meek.

Cotypes.

Colorado (Cret.). Two miles from Coalville, Utah.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 160, pl. 15, figs. 2a.

= Pugnellus fusiformis.

8648. Anchura? fusiformis Meek.

Plesiotypes.

Colorado (Cret.). East bank Rio Puerco, 6 miles below Casa Salazan, New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 190, pl. 18, fig. 4a.

= Aporrhais prolabiata (White)?

8054. Anchura haydeni White.

Holotype.

Fort Pierre (Cret.). Fifteen miles west of Greeley, Colorado.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1877 (1879), p. 311, pl. 7, fig. 1a.

8086. Anchura (Drepanocheilus) mudgeana White. Cotypes. Denison (Cret.). Denison, Texas.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 187p. 312, pl. 7, figs. 3a, 3b. 288. Anchura (Drepanochilus) nebrascensis (Evans and Shumard). Plesiotypes.

Fort Pierre (Cret.). Crow Creek, near Black Hills, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terrs., IX, 1876, p. 326, pl. 19, figs. 5a-c.

12309. Anchura (Drepanocheilus) nebrascensis (Evans and Shumard). Plesiotypes.

Montana (Cret.). East fork of Beaver Creek, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills, Dakota, 1880, p. 429, pl. 12, figs. 2, 3.

8660. Anchura nuptialis White.

Holotype.

Colorado (Cret.). Five miles west of Mineral Spring, Arizona.

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 1874, p. 24.

= Lispodesthes nuptialis.

284. Anchura? parva (Meek and Hayden). Holotype.

Montana (Cret.). Yellowstone River, near Miles City, Montana.

Meek, Rept. U. S. Geol. Surv. Terrs., IX, 1876, p. 328, pl. 19, figs. 4a, 4b.

See Aporrhais parva.

8069. Anchura (Drepanocheilus) prolabiata (White). Cotypes. Colorado (Cret.). Upper Kanab, Utah.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1877 (1879), p. 313, pl. 7, fig. 2a.

= Aporrhais prolabiata.

8078. Anchura (Drepanocheilus) ruida (White). Holotype. Colorado (Cret.). Upper Kanab, Southern Utah.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1877 (1879),
p. 321, pl. 7, figs. 4a, 4b.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 145, pl. 31, figs. 3, 4.

276. Anchura? sublevis (Meek and Hayden). Holotype.

Montana (Cret.). Yellowstone River, near Miles City,
Montana.

Meek, Rept. U. S. Geol. Surv. Terrs., IX, 1876, p. 327, pl. 19, figs. 3a, 3b.

See Aporrhais sublevis.

12344. Anchura? sublevis (Meek and Hayden). Plesiotypes. Fort Pierre (Cret.). Near Box Elder Creek, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills, Dakota, 1880, p. 428, pl. 12, fig. 6.

Ancilla shepardi Dall. See Ancillaria shepardi.

109023. Ancillaria chipolana Dall.

Holotype.

Oligocene. Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, pl. 41, fig. 3.

115568. Ancillaria lamellata Guppy. Holotype. Eocene. Manzanilla, Trinidad, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 579, pl. 26, fig. 9.

115567. Ancillaria pinguis Guppy.

Holotype.

Miocene. Jamaica, British West Indies.

Guppy, Geol. Mag., London, Dec. II, I, 1874, p. 434, pl. 16, fig. 3.

112093. Ancillaria shepardi Dall.

Holotype.

Oligocene. Hillsboro Bay, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 46, pl. 4, fig. 4.[Corrected to Ancilla, op. cit., Pt. II, p. 225.]

470. Ancyloceras? cheyenensis Meek and Hayden. Holotype. Fort Pierre (Cret.). Mouth of Big Cheyenne River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 71. = Heteroceras? cheyennense.

12295. Ancyloceras jenneyi Whitfield.

Cotypes.

Fort Pierre (Cret.). East fork Beaver Creek, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills, Dakota, 1880, p. 452, pl. 16, figs. 7-9.

469. Ancyloceras? nebrascensis Meek and Hayden. Holotype. Fort Pierre (Cret.). Cheyenne River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 71. = Heteroceras? nebrascense.

12287. Ancyloceras tricostatus Whitfield.

Holotype.

Fort Pierre (Cret.). Cheyenne River, near French Creek, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources, Black Hills, Dakota, 1880, p. 454, pl. 15, figs. 7, 8.

387. Ancyloceras? uncum (Meek and Hayden). Holotype. Fort Pierre (Cret.). South Fork of Cheyenne, near Black Hills, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 409, pl. 2-figs. 1a, 1b.

See Ancyloceras (Hamites) uncus.

387. Ancyloceras (Hamites) uncus Meek and Hayden. Holotype. Fort Pierre (Cret.). South Fork of Cheyenne River, near Black Hills, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1858, p. 56. = Ancyloceras uncum.

12532. Ancylus undulatus Meek. Cotypes. Miocene. Fossil Hill, Kawsoh Mountains, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par. IV, Pt. I, 1877, p. 186, pl. 17, figs. 12, a-b.--White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 451, pl. 32, fig. 10.

111658. Anguinella virginiana Conrad. Plesiotype.

Miocene. Jericho, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 132, pl. 24, figs. 1-5.

107808. Anisodonta americana Dall. Holotype. Pliocene. Monroe County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1133, pl. 36, fig. 7.

135749. Anisodonta (Basterotia) bowdeniana Dall. Holotype.
Oligocene (Bowden beds). Bowden, Jamaica.

Dall Trans, Wagner Free Inst. Sci. Phila., III., Pt. V, 1900, p. 1133.

115085. Anisodonta (Fulcrella) carolina Dall. Holotype.
Miocene. Duplin County, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1133, pl. 45, fig. 20.

247. Anisomyon alveolus (Meek and Hayden). Holotype.
Montana (Cret.). Yellowstone River, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 292, pl. 18, figs. 4a, 4b.

See Helcion alveolus.

12278. Anisomyon alveolus (Meek and Hayden). Plesiotype.
Fort Pierre (Cret.). Old Woman Fork, of Cheyenne River,
Wyoming.

Whitfield Rept. Geol. and Resources Black Hills, Dakota, 1880, p. 433, pl. 12, fig. 20.

248. Anisomyon borealis (Morton). Plesiotypes.

Fort Pierre (Cret.). Great Bend of Missouri below Fort
Pierre, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 288, pl. 18, figs. 9a-e.

See Helcion carinatus.

12254. Anisomyon borealis (Morton). Plesiotype.
Fort Pierre (Cret.). Cheyenne River, Black Hills, South
Dakota.

Whitfield, Rept. Geol. and Resources Black Hills, Dakota, 1880, p. 436, pl. 12, fig. 23.

8649. Anisomyon borealis (Morton). Plesiotypes.
Montana (Cret.). Gallinas Creek, New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 193, pl. 18, figs. 9a, b.

12430. Anisomyon centrale Meek. Cotypes. Fox Hills (Cret.). Box Elder and Colorado City, Colorado.

Meek, Fourth Ann. Rept. U. S. Geol. Surv. Terr., 1871, p. 312.— White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879, p. 303, pl. 9, figs. 1a-d

8659. Anisomyon centrale Meek. Plesiotype.
Montana (Cret.). Gallinas Creek, New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 194, pl. 18, figs. 8a, b.

246. Anisomyon patelliformis Meek and Hayden. Cotypes.

Montana (Cret.). Yellowstone River, near Miles City,
Montana.

Meek and Hayden, Am. Journ. Sci., (2), XXIX, 1860, pp. 34, 35, pl. 1, figs. 1-3.—Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 290, pl. 18, figs. 5a-c, 5e, 5f.

See Helcion patelliformis and Acmæa? papillata.

12268. Anisomyon patelliformis Meek and Hayden. Plesiotypes.
Fort Pierre (Cret.). Old Woman Fork of Cheyenne River,
Wyoming.

Whitfield, Rept. Geol. and Resources Black Hills, Dakota, 1880, p. 435, pl. 12, figs. 17, 18.

249. Anisomyon sexsulcatus (Meek and Hayden). Holotype.

Montana (Cret.). Yellowstone River, near Miles City,
Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 293, pl. 18, figs. 8a, 8b.

See Helcion sexsulcatus.

245. Anisomyon shumardi Meek and Hayden. Holotype. Fort Pierre (Cret.). Great Bend of Missouri, below Fort Pierre, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 28 figs. 7a-c.

244. Anisomyon subovatus (Meek and Hayden). Holotype.
Montana (Cret.). Yellowstone River, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 291, pl. 18, figs. 5d, 6.

See Helcion subovatus.

12298. Anisomyon subovatus (Meek and Hayden). Plesiotypes.
Fort Pierre (Cret.). Old Woman Fork of Cheyenne River,
Wyoming.

Whitfield, Rept. Geol. and Resources Black Hills, Dakota, 1880, p. 434, pl. 12, fig. 19.

43735. Anisotrypa fistulosa Ulrich. Figured sections of cotype. St. Louis (Miss.). Pella, Iowa.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 448, pl. 72, figs. 6b, 6c.

43413. Anisotrypa solida Ulrich. Cotypes and figured sections. 43414. Chester (Miss.). Sloans Valley, Kentucky; Chester, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 449, pl. 72, figs. 9-9e.

43631. Anisotrypa symmetrica Ulrich. Cotypes and figured sections. Chester (Miss.). Sloans Valley, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 276, pl. 13, figs. 5-5c; Geol. Surv. Ill., VIII, 1890, p. 448, pl. 72, fig. 5.

13574. Anodonta decurtata Conrad.

Holotype.

Colorado (?) Eocene (?).

Conrad, Am. Journ. Conch., VI, p. 200, pl. 11, fig. 8.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 479, pl. 29, figs. 27, 28.

9028. Anodonta parallela White.

Cotypes.

Laramie (Cret.). Crow Creek, northern Colorado.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883),
Pt. I, p. 62, pl. 24, fig. 3a; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 429, pl. 19, fig. 5.

13406. Anodonta propatoris White. Cotypes. Laramie (Cret.). Dog and Birch Creeks, Montana.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883), Pt. I, p. 61, pl. 24 figs. 2a-d; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 429, pl. 19, figs. 6-9.

13917. Anodontopsis amygdalæformis Walcott. Cotype.

Middle Devonian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 180, pl. 15, figs. 7, 7b.

26409. Anodontopsis? milleri Meek. Cotypes.

Richmond (Ord.). Forty miles west of Cincinnati, Ohio.

Meek, Am. Journ. Sci., (3) II, 1871, p. 297; Pal. Ohio, I, 1873, p. 140, pl. 12, figs. 1a, 1b, 1d.

=Cycloconcha milleri.

43276. Anolotichia impolita Ulrich. Cotypes and figured sections. Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 327, pl. 28, figs. 15-20.

43275. Anolotichia ponderosa Ulrich. Cotype and figured sections. Richmond (Ord.). Wilmington, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 473, pl. 41, figs. 3b, 3c, 3d.

135671. Anomalocardia bowdeniana Dall. Holotype.

Bowden (Oligocene). Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1304, pl. 57, fig. 7.

109242. Anomalocardia caloosana (Dall). Holotype.

Pliocene. Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1305.

See Venus (Anomalocardia) caloosana.

Chipola (Oligocene). Alum Bluff, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1304, pl. 55, fig. 1.

115169. Anomalocardia dupliniana Dall. Holotype.

Upper Miocene. Natural Well, Duplin County, North
Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1305, pl. 55, fig. 11.

140801. Anomalocardia floridana Conrad. Holotype. Oligocene. Ballast Point, near Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1303, pl. 55, figs. 14, 15.

35078. Anomalocystites cornutus Hall. Plesiotypes.
35079. Coeymans (Dev.). Litchfield Township, Herkimer
County, New York.

Schuchert, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 206, text fig. 21; pl. 40, figs. 4, 5.

33661. Anomalocystites (?) disparilis Hall. Plesiotype.
Oriskany (Dev.). Cumberland, Maryland.

Schuchert, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 207, text fig. 22.

46087. Anomalodonta alata Meek.
Richmond (Ord.). Near Morrow, Ohio.

Plesiotype.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 638, pl. 46, fig. 1.

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46088. Anomalodonta gigantea Miller. Plesiotype. Richmond (Ord.). Versailles, Indiana.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 637, pl. 50, figs. 1, 2.

46089. Anomalodonta plicata Ulrich. Holotype. Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 638, pl. 46, figs. 2, 3.

46546. Anomaloides reticulatus Ulrich. Cotypes.

Lorraine (Ord.). Covington, Kentucky.

Ulrich, Jour. Cincinnati Soc. Nat. Hist., I, 1878, p. 92, pl. 4, figs. 6-6b.

= Anomalospongia reticulata.

46546. Anomalospongia reticulata (Ulrich). Cotypes.

Lorraine (Ord.). Covington, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. 1, 1893, p. 69, pl. F, figs. 13-15.

See Anomaloides reticulatus.

489. Anomia concentrica Meek. Cotypes. Colorado (Cret.). Sulphur Creek, Bear River, Wyoming.

Meek, Proc. Acad. Nat. Sci. Phila., for 1860, p. 311; Rept. Expl. Great Basin of Utah, Simpson, 1876, p. 359, pl. 4, fig. 3.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 67, pl. 8, fig. 7.

135845. **Anomia floridana** Dall. Holotype. Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 783, pl. 35, fig. 7.

7828. Anomia? gryphorhynchus Meek. Cotypes.
Montana (Cret.). Point of Rocks, Wyoming.

Meek, Fifth Ann. Rept. U. S. Geol. Surv. Terrs., 1872, pp. 375-376.

9050. Anomia gryphorhynchus Meek. Plesiotypes.

Montana (Cret.) Two miles west of Point of Rocks,

Wyoming.

White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 422, pl. 12, fig. 15.

7828. Anomia (Placunopsis?) gryphorhynchus Meek. Plesio types.

Montana (Cret.). Near Point of Rocks, Wyoming.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terrs., 1873, p. 509.

7949. Anomia limatula Dall. Holotype and plesiotypes. 154341. Pliocene. San Diego, California.

Dall, Proc. U. S. Nat. Mus., I, 1878, p. 15; Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 785, pl. 35, fig. 19.

Oligocene. Near Baileys Ferry, Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 783, pl. 35, fig. 11.

7842. Anomia micronema Meek. Cotypes.

Laramie (Cret.). Two hundred miles east of Denver,

Colorado.

Meek, Bull. U. S. Geol. and Geogr. Surv. Terrs., (2), I, 1875, p. 42.

9931. Anomia micronema Meek. Plesiotypes. 12492. Laramie (Cret). Two hundred miles east of Denver and 15 miles north of Orchard Station, Colorado.

White, Proc. U. S. Nat. Mus., V, 1882, p. 97, pl. 3, fig. 3; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 422, pl. 12, figs. 7, 9, 11.

9038. Anomia micronema Meek. Plesiotypes. Laramie (Cret.). Crow Creek and Bijou Creek, Colorado.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terrs., 1878 (1883), Pt. I, p. 57, pl. 25, figs. 2a-d; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 422, pl. 12, figs. 6, 8, 10.

241. Anomia obliqua Meek and Hayden. Holotype.
Niobrara (Cret.). Missouri River, near mouth of Niobrara
River, Nebraska.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila. for 1860, p. 181.—Meek, Rept. U. S. Geol. Surv. Terrs., IX, 1876, p. 22, pl. 9, fig. 2.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 68.

[Probably the young of Ostrea patina. T. W. Stanton.]

7874. Anomia propatoris White. Cotype.
Montana (Cret.). Coalville, Utah.

White, Twelfth Ann. Rept. U. S, Geol. Surv. Terrs., 1878 (1883),
Pt. I, p. 14, pl. 12, figs. 15a-15b; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 422, pl. 5, figs. 6, 7.

22865. Anomia propatoris White? Plesiotypes. Colorado (Cret.). Muddy Creek, Huerfano Park, Colorado. Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 67, pl. 8, fig. 10.

8047. Anomia rætiformis Meek. Cotypes. Fox Hills (Cret.). Ridge southeast of Laporte, Colorado.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 141, text fig. 1.

23023. Anomia senescens Stanton. Holotype.
Knoxville (Lower Cret.). Near Lowery's, Tehama
County, California.

Stanton, Bull. No. 133, U. Geol. Surv., 1895 (Feb., 1896), p. 35, pl. 2, fig. 2.

1865. Anomia subcostata Conrad. Holotype. Miocene. Carrizo Creek, Colorado Desert, California.
Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Oc V, 1856, p. 325, pl. 5, fig. 34.

9830. Anomia subcostata Conrad.

Plesiotype.

Miocene. Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. 2, 1857; p. 161, pl. 19, figs. 1a, 1b.

22864. Anomia subquadrata Stanton. Cotypes.
Colorado (Cret.). Williams Creek, Huerfano Park,
Colorado.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 66, pl. 8, figs. 8, 9.

346. Anomia subtrigonalis Meek and Hayden. Holotype and paratype.

Fort Pierre (Cret.). Bijou Hill, Missouri River, Nebraska.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1860, p. 181.— Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 22, pl. 16. figs. 4a, 4b.

107154. Anomia umbonata Guppy. Holotype. Upper Oligocene. Ally Creek, Naparima, Trinidad, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 325, pl. 30, fig. 6.

15426. Anomocare? parvum Walcott. Holotype.

Lower Cambrian, Prospect Mountain, Eureka District,
Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 59, pl. 9, fig. 2;
Bull. No. 30, U. S. Geol. Surv., 1886, p. 209, pl. 25, fig. 1;
Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 653, pl. 96, fig. 2.

46090. Anoptera miseneri Ulrich. Cotypes.
46091. Richmond (Ord.). Richmond, Indiana; Clarksville, Ohio.
Ulrich, Geol. Surv. Ohio, VII, 1893, p. 650, pl. 50, figs. 5-9.

25542. Anthonomus revictus Scudder. Cotypes.
Older Tertiary. Green River City, Wyoming.
Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 117, pl. 11, fig. 6.

25539. Anthonomus soporus Scudder. Plesiotype.
Older Tertiary. Green River City, Wyoming.
Scudder, Mon. XXI. U. S. Geol. Surv., 1893, p. 116, pl. 11, fig. 1.

38162. Anthracoblattina americana Scudder. Holotype. Upper Coal Measures. Near Clinton, Missouri. Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 129, pl. II. fig. 7.

38104. Anthracoblattina virginiensis Scudder. Holotype.
Lower Permian. Cassville, West Virginia.
Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 130, pl. 11.

idder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 130, pl. F fig. S. 37984. Anthracomartus pustulatus Scudder. Holotype.

Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, p. 452, pl. 40, figs. 5, 8; Foss. Insects N. America, 1890, p. 428, pl. 32, figs. 5, 8.

37982. Anthracomartus trilobitus Scudder. Cotypes.

Upper part of Pottsville Series (Penn.). Near Fayetteville, Washington County, Arkansas.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, p. 451, pl. 39, figs. 7, 9; Foss. Insects N. America, 1890, p. 427, pl. 31, figs. 7, 9.—Fritsch, Pal. Arachiniden, 1904, p. 40, fig. 49.

38138. Anthracothremma robusta Scudder. Cotypes. 38139. Upper Coal Measures. Mazon Creek and Braidwood, Illinois.

Scudder, Mem. Bost. Soc. Nat. Hist., III, 1885, p. 327, pl. 30, figs. 1, 5, 6; Foss. Insects N. America, I, 1890, p. 291, pl. 16, figs. 1, 5, 6.

38843. Anthrapalæmon gracilis Meek and Worthen. Plesiotypes.
Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Packard, Mein. Nat. Acad. Sci., III, 1886, p. 135, pl. 7, figs. 3, 3a, 4, 4a, 5, 6.

41836. Aparchites arrectus Ulrıch.

Black River (Ord.). St. Paul, Minnesota.

Holotype.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 646, pl. 43, figs. 35, 36.

41829. Aparchites chatfieldensis Ulrich. Holotype. Black River (Ord.). Chatfield, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 646, pl. 43, figs. 37-38.

41832. Aparchites ellipticus Ulrich. Cotypes.
Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 644, pl. 43, figs. 15-17.

41834. Aparchites fimbriatus (Ulrich). Holotype. Richmond (Ord.). Near Spring Valley, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 645, pl. 45, figs. 10-12.

See Leperditia fimbriata.

41828. Aparchites granilabiatus (Ulrich). Holotype.
Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. 1894, p. 644, pl. 45, figs. 21-23.

See Leperditia granilabiata.

41835. Aparchites granilabiatus neglectus Ulrich. Cotypes. Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 645.

41850. Aparchites inornatus Ulrich.

Holotype.

Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ Cincinnati Soc. Nat. Hist., XIII, 1890, p. 182, pl. 16, figs. 3a, b.

41837. Aparchites millepunctatus (Ulrich).

Holotype.

Stones River (Ord.). Fountain, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 645, pl. 45, figs. 16-18.

See Leperditia millepunctata.

41302. Aparchites minutissimus trentonensis Ulrich.

41303.

Cotypes.

Black River (Ord.). Fountain, Minnesota. Trenton (Ord.). Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept. III Pt. II, 1894, p. 646, pl. 43, figs. 18-20.

41811. Aparchites oblongus Ulrich.

Holotype.

Richmond (Ord. . Middletown, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 137, pl. 10, figs. 10a-c.

25538. Apion evestigatum Scudder.

Holotype.

Older Tertiary. Roan Mountains, Western Colorado.

Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 84, pl. 10, fig. 8.

275. Aporrhais biangulata Meek and Hayden). Holotype and

Montana (Cret.) Vellowstone River, near Miles City, Montana

Meck, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 322, pl. 19, figs. 6a-c, and text fig. 37.

See Rostellaria biangulata.

12334. Aporrhais meeki Whitfield.

Holotype.

Fort Pierre (Cret.). Cheyenne River, near Rapid Creek, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills, Dakota, 1880, p. 426, pl. 12, fig. 5.

284. Aporrhais parva Meek and Hayden. Holotype.

Montana Cret. Yellowstone River, Montana, near Miles City.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1860, p. 178. = Anchura? parva.

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22917. Aporrhais (Perissoptera?) prolabiata (White). Plesiotypes. Colorado (Cret.). Upper Kanab Valley, Utah.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 144, pl. 31, fig. 2.

See Anchura (Drepanocheilus) prolabiata.

276. Aporrhais sublevis Meek and Hayden. Holotype.

Montana (Cret.). Yellowstone River, near Miles City,
Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1860, p. 178. = Anchura? sublevis.

23095. Aptychus? knoxvillensis Stanton. Holotype.
Knoxville (Lower Cret.). Near Knoxville, Napa County,
California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 83, pl. 18, figs. 1, 2.

148930. Arca aquila Heilprin. Plesiotypes.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 621, pl. 31, fig. 12.

61621. Arca bowdeniana Dall.

Holotype.

Oligocene. Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 622, pl. 33, fig. 12.

111618. Arca (Striarca) centenaria (Say.). Plesiotype.
Miocene. Near Shiloh, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 42, pl. 6, figs. 5-7.

115682. Arca centrota Guppy.

Holotype.

Pliocene. Matura, Trinidad.

Guppy, Proc. Sci. Assoc. Trinidad, 1867, p. 175; Geol. Mag., Dec. II, I, 1874, p. 443, pl. 18, fig. 23.

430. Arca (Cucullæa) cordata Meek and Hayden. Holotype. Fox Hills (Cret.). Moreau River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 86. = Cucullæa (Idonearca) cordata.

3499. Arca devincta Conrad.

Holotype.

Miocene. Astoria, Oregon.

Conrad, Wilkes U. S. Expl. Exped., X, 1849, p. 726, Atlas pl. 18, figs. 10a.

[Gabb unites this with A. microdonta.—W. H. Dall.]

12386. Arca? equilateralis Meek.

Cotypes.

Nanaimo (Cret.). Nanaimo?, Vancouver Island.

Meek, Bull. U. S. Geol. and Geogr. Surv. Terr., II, 1876, 1 pl. 2, figs. 6a.

12386. Arca (Cucullæa) equilateralis Meek. Cotypes.
Nanaimo (Cret.). Nanaimo, Vancouver Island.

Meek, Trans. Albany Inst., IV, 1857, p. 40.

115681. Arca filicata Guppy. Holotype. Eocene. Manzanilla, Trinidad, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 583, pl. 26, fig. 5.

115679. Arca inæquilateralis Guppy. Holotype.
Miocene. Jamaica, British West Indies.
Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 293, pl. 18, fig. 2.

201. Arca (Cucullæa) inornata Meek and Hayden. Cotypes.

Jurassic. Black Hills, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., 1858, p. 51.

= Grammatodon inornatus.

153877. Arca (Noëtia) limula (Conrad). Plesiotype.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila. III, Pt. IV, 1898, p. 631, pl. 31, figs. 14, 14b.

153878. Arca limula platyura Dall. Cotypes.
Pliocene. Alligator Creek, Caloosahatchie River, Florida.
Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p.
632.

632.

1844. Arca microdonta Conrad. Holotype.

Miocene. Tulare Valley, California.
Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, V. 1856, p. 323, pl. 3, fig. 29.

See Arca devincta.

56, figs. 21, 24.

163473. Arca (Acar) millifila Dall. Holotype.
Pliocene. Shell Creek, Florida.
Dall, Trans, Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl.

13330. Arca obispoana Conrad. Cotypes.
Miocene. San Luis Obispo Valley, California.
Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean,

VII, 1857, p. 192, pl. 5, fig. 1.

7895. Arca? parallela Meek. Holotype. Mentor (Cret.). Twelve miles southwest of Salina, Kansas.

Meek, Fourth Ann. Rept. U. S. Geol, Surv. Terr., 1871, p. 303. = Barbatia parallela.

114786. Arca paratina Dall. Holotype. Oligocene. Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 621, pl. 33, fig. 14.

443. Arca (Cucullæa) shumardi Meek and Hayden. Holotype and paratypes.

Fox Hills (Cret.). Moreau River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 86. = Cucullæa (Ideonarca) shumardi.

9846. Arca subelongata Conrad. Holotype.
Lower Cretaceous. Between El Paso and Frontera, Texas.
Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. 2, 1857,
p. 148, pl. 6, figs. 3a, 3b.

23044. Arca tehamaensis Stanton. Holotype. Knoxville (Lower Cret.). Five miles north of Paskenta, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 50, pl. 6, fig. 8.

23045. Arca textrina Stanton. Cotypes. Knoxville (Lower Cret.). Near Stephenson, Tehama County, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 50, pl. 6, figs. 6, 7.

115680. Arca trinitaria Guppy. Cotypes. Eocene. Manzanilla, Trinidad, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 583, pl. 26, fig. 3a, 3b.

148932. Arca umbonata Lamarck. Cotypes. Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV. 1898, p. 620, pl. 38, figs. 4, 4a.

12398. Arca vancouverensis Meek. Holotype. Nanaimo (Cret.). Nanaimo, Vancouver Island.

Meek, Trans. Albany Inst., IV, 1857, p. 40.

= Nemodon vancouverensis.

See Grammatodon? vancouverensis.

148928. Arca wagneriana Dall. Cotypes.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV. 1898, p. 619, pl. 39, figs. 6, 7.

8192. Arcestes? cirratus White. Cotypes.

Triassic. Five miles west of John Gray's Lake, Southeastern Idaho.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr. Pt. I, (1883), p. 116. 12523. Arcestes gabbi Meek. Cotypes.
Triassic. Near Cottonwood Canyon, West Humboldt
Range, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 121, pl. 10, figs. 6a.

12531. Arcestes? perplanus Meek. Cotypes.
Upper Triassic. Buena Vista Canyon, South Fork West
Humboldt Range, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 120, pl. 11, figs. 7a.

27126. Archæocaris vermiformis Meek. Cotypes. Waverly (Miss.). Near Danville, Kentucky.

Meek, Geol. Surv. Ohio, II, 1875, p. 321, pl. 18, fig. 7.

8235. Archæocidaris cratis White. Holotype.
Upper Carboniferous. Confluence of Green and Grand
rivers, Utah.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1878 (1883), p. 130, pl. 33, fig. 2a.

8031. Archæocidaris dininnii White. Cotype. Upper Carboniferous. Tecumseh, Nebraska,

White, Proc. U. S. Nat. Mus., II, 1880, p. 260, pl. 1, figs. 13-15;
Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883), Pt. I, p. 131, pl. 35, figs. 6a-6c.

8472. Archæocidaris ornatus Newberry. Plesiotype.
Upper Carboniferous. Ten miles west of Ojo del Oso,
near Fort Wingate, New Mexico.

White, Rept. U. S. Geogr. Surv., W. 100th Merid., IV, Pt. I, 1876, p. 104, pl. 6, fig. 7a.

35369. Archæocidaris ourayensis Girty. Holotype. Hermosa? (Upper Carb.). Ouray, Colorado.

Girty, Prof. Pap. 16, U. S. Geol. Surv., 1903, p. 329, pl. 1, fig. 14.

9449. Archæocidaris triplex White. Cotypes. Upper Carboniferous. Near Taos, New Mexico.

White, Rept. U. S. Geogr. Surv., W. 100th Merid., III, Suppl., 1881, p. 22, pl. 4, figs. 3a-3c.

6599. Archæocidaris? triserrata Meek. Cotypes. Upper Carboniferous. Near Omaha, Nebraska.

Meek, Final Rept. U. S. Geol. Surv., Nebr. (Hayden), 1872, p. 151, pl. 1, figs. 6a-6c.

8471. Archæocidaris trudifer White. Cotypes. Red Wall (Upper Carb.). Camp Apache, Navajo County, Arizona.

White, Prelim. Rept. U. S. Geogr. Surv., W. 100th Merid., 8 vo., 1874. p. 17; Rept. U. S. Geogr. Surv., W. 100th Merid., IV, Pt. I, 1877. p. 104. pl. 6, figs. 8a, 8b.

14688. Archæocyathus atlanticus Billings. Plesiotypes.

Lower Cambrian. L'Anse au Loup, Labrador and Silver 15301. Peak, Nevada.

> Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 73, pl. 3, figs. 1-2a.

=Spirocyathus atlanticus.

15302. Archæocyathus billingsi Walcott. Holotype. Lower Cambrian. L'Anse au Loup, Labrador.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 74, pl. 3, figs.

= Coscinocyathus billingsi.

#### 18352. Archæocyathus (Archæocyathellus) dwighti Walcott.

Lower Cambrian. Troy, and Washington county, New York.

Walcott, Proc. U. S. Nat. Mus., XII, 1889, p. 34; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 601, pl. 54, figs. 4, 4a.

15304. Archæocyathus profundus (Billings). Plesiotype. Lower Cambrian. L'Anse au Loup, Labrador.

> Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 600, pl. 52, figs. 1-1c; pl. 53, figs. 1-1b; pl. 54, fig. 3.

See Ethmophyllum profundum.

#### 15306. Archæocyathus (Archæocyathellus) rarus (Ford).

Plesiotype.

Lower Cambrian. Troy, New York.

Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 601, pl. 54, figs. 2, 2a.

See Ethmophyllum rarum.

# 15305. Archæocyathus (Archæocyathellus) rensselæricus (Ford).

Plesiotypes.

Lower Cambrian. Troy, New York.

Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 600, pl. 54, figs. 1-1e.

See Ethmophyllum rensselæricum.

### 43416. Archimedes communis Ulrich.

Cotypes. Chester (Miss.). Sloans Valley, Pulaski County, Kentucky.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 573, pl. 63, figs. 1-1d.

## 43736. Archimedes compactus Ulrich.

Chester (Miss.). Sloans Valley, Pulaski County, Ken-

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 572, pl. 63, figs. 2, 2a.

### 44097. Archimedes distans Ulrich.

C

Chester (Miss.). Chester, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 578, pl. 63, figs. 9-

43740. Archimedes invaginatus Ulrich. Figured sections of cotype.

Chester (Miss.). Chester, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 575, pl. 63, figs. 11c, 11d.

43417. Archimedes laxus Hall. Plesiotype. Chester (Miss.). Litchfield, Kentucky.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 580, pl. 63, figs. 15, 15a.

See Helicopora archimediformis.

43737. Archimedes proutanus Ulrich. Cotypes.
Chester (Miss.). Sloans Valley, Pulaski County, Kentucky.
Ulrich, Geol. Surv. Ill., VIII, 1890, p. 576, pl. 63, figs. 3-3c.

43738. Archimedes proutanus Ulrich var. Plesiotype.
Chester (Miss.). Sloans Valley, Pulaski County, Kentucky.
Ulrich, Geol. Surv. Ill., VIII, 1890, p. 576, pl. 63, fig. 11b.

- 43739. Archimedes terebriformis Ulrich. Cotypes. Chester (Miss.). Sloans Valley, Pulaski County, Kentucky. Ulrich, Geol. Surv. Ill., VIII, 1890, p. 575, pl. 63, figs. 5-5b.
- 38093. Archimylacris parallela Scudder. Holotype. Upper Coal Measures. Campbell's Ledge, near Pittston, Pennsylvania.

Scudder, Mem. Boston Soc. Nat. Hist., III. 1879, p. 85, pl. 6, fig. 6; Foss. Insects N. America, I, 1890, p. 105, pl. 6, fig. 6.

38091. Archimylacris paucinervis Scudder. Holotype.
Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, p. 411, pl. 31, fig. 5; Foss. Insects N. America, I, 1890, p. 387, pl. 23, fig. 5.

45686 Archinacella cingulata Ulrich. Holotype.
Black River (Ord.). Mercer County, Kentucky.
Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II,

1897, p. 829, pl. 61, figs. 1, 2.

45687. Archinacella deleta (Sardeson). Plesiotype. Black River (Ord.). Near Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 831, pl. 61, fig. 17.

45688. Archinacella depressa Ulrich and Scofield. Plastotype. Stones River (Ord.). Minneapolis, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 830, pl. 61, figs. 8, 9. 45689. Archinacella instabilis incurva Ulrich and Scofield.

Holotype.

Black River (Ord.). Goodhue County, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 835, pl. 61, figs. 21-23.

45690, Archinacella powersi Ulrich and Scofield. Plastotype. Stones River (Ord.). Beloit, Wisconsin.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 820, fig. 1a; p. 829, figs. 3-5; pl. 61, fig. 4.

45691. Archinacella richmondensis Ulrich. Holotype. Richmond (Ord.). Richmond, Indiana.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 834, pl. 61, figs. 6, 7.

45692. Archinacella rotunda Ulrich and Scofield. Holotype. Richmond (Ord.). Graf, Iowa.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 835, pl. 61, figs. 24, 25.

43693. Archinacella rugatina Ulrich. Holotype. Richmond (Ord.). Middletown, Ohio.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 835, pl. 82, figs. 5, 6.

43694. Archinacella semicarinata Ulrich and Scofield. Holotype. Trenton (Ord.). Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 833, pl. 61, figs. 12, 13.

45695. Archinacella simulatrix Ulrich and Scofield. Holotype. Black River (Ord.). St. Paul, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, 1t. II, 1897, p. 833, pl. 61, figs. 10, 11.

45696. Archinacella subrotunda Ulrich and Scofield. Holotype. Black River (Ord.). Near Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 834, pl. 61, figs. 26, 27.

37970. Architarbus elongatus Scudder. Holotype. Upper Coal Measures. Braidwood, Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, p. 449, pl. 40, fig. 4; Foss. Insects N. America, 1890, p. 425, pl. 32, fig. 4.

=Geraphrynus (Architarbus) elongatus.

37993. Archiulus (?) glomeratus Scudder. Cotypes.
37994. Upper Coal Measures. Mazon Creek and Braidwood,
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, p. 436
 figs. 2, 3; Foss. Insects N. America, I, 1890, p. 412
 figs. 2, 3.

191. Arcopagella (?) macrodonta Meek. Holotype.
Dakota (Cret.). Big Sioux River, three miles above its
mouth, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 202, pl. 1, fig. 2.

Mentor (Cret.). Twelve miles southwest of Salina, Kansas.

Meek, Fourth Ann. Rept. U. S. Geol. Surv. Terr., 1871, p. 309, text figs. A, B; Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 202, pl. 2, figs. 4a, 4b.

13328. Arcopagia unda Conrad. Holotype. Miocene. Shore of Santa Barbara County, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 192, pl. 4, figs. 3, 4.

[May be the same as Metis alta (Conrad). W. H. Dall.]

24560. Arethusina americana Walcott. Cotype.
Upper Cambrian. North of Dunderberg mine, Eureka
District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 62, pl. 9, fig. 27.

42436. Arges wesenbergensis paulianus Clarke. Cotype. Trenton (Ord.). St. Paul, Minnesota.

Clarke, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 745, fig. 64.

109294. Argyrotheca schucherti Dall. Holotype. Miocene. Jackson Bluff, Ocklockonee River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1539, pl. 58, fig. 8.

35230. Arionellus levis Walcott. Holotype.

Middle Cambrian. Crowfoot section, Gallatin Range,
Yellowstone National Park.

Walcott, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 462, pl. 65, fig. 1.

:: So. Arionellus (Crepicephalus) oweni Meek and Hayden.

Holotype.

Upper Cambrian. Near head of Powder River, Big Horn Mountains. Wyoming.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1861, p. 436; Amer. Journ. Sci. (2), XXXIII, 1862, p. 74, fig. 4.

= Ptychoparia oweni. See Agraulos oweni.

40002. Aristerella nitidula Ulrich. Cotypes.
40003. Black River (Ord.). Chatfield and St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894. p. 524. pl. 35. figs. 30-39.

17446. Aristozoe rotundata Walcott. Cotype.

Lower Cambrian. Near North Greenwich, Washington
County, New York.

Walcott, Amer. Journ. Sci., (3) XXXIV, 1887, p. 193, pl. 1, fig. 9; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 627, pl. 80, fig. 3.

17447. Aristozoe troyensis (Ford). Plesiotype.
Lower Cambrian. Washington County, New York.

Walcott, Amer. Journ. Sci., (3) XXXIV, 1887, p. 193, pl. 1, fig. 8; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 628, pl. 80, fig. 2a.

26380. Arthracantha punctobrachiata Williams. Plesiotype. Hamilton (Dev.). Thedford, Ontario, Canada.

Wood, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 81, pl. 16, fig. 4.

43633. Arthroclema armatum Ulrich. Cotypes.

Trenton (Ord.). Cannon Falls, Minnesota.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XII, 1890, p. 194, fig.
19, 19a-h; Geol. and Nat. Hist. Surv. Minn., Final Rept., III,
Pt. I, 1893, p. 201, pl. 2, figs. 8-11, 25, 28-33; pl. 3, fig. 7.

43415. Arthroclema billingsi Ulrich. Holotype. Trenton (Ord.). Ottawa, Canada.

Ulrich, Geol. Surv. Illinois, VIII, 1890, p. 642; Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 197, pl. 2, fig. 7.

43634. Arthroclema cornutum Ulrich. Cotypes.

Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XII, 1890, p. 193, figs.
18, 18a-g. Geol. and Nat. Hist. Surv. Minn., Final Rept., III,
Pt. I, 1893, p. 200, pl. 2, figs. 16-21, 23

43665. Arthroclema spiniforme Ulrich. Cotypes. Stones River (Ord.). Lebanon, Tennessee.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 161, pl. 6,

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 161, pl. 6, figs. 10, 10a.

= Helopora spiniformis.

43498. Arthroclema striatum Ulrich. Cotypes.
Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 198, pl. 2, figs. 22, 24; pl. 3, figs. 28-33.

33068. Arthrolycosa antiqua Harger. Plastotype.

Upper Coal Measures. Mazon Creek, Grundy Cot

Illinois.

Beecher, Amer. Journ. Sci. (3), XXXVIII, 1889, pp. 219 figures.

43638. Arthronema curtum Ulrich. Holotype.

Lorraine (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 161, pl. 6, fig. 9.

= Arthrostylus curtus.

43637. Arthronema tenuis (James).

Plesiotypes.

Utica (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 160, pl. 6, figs. 8-8c.

=Arthrostylus tenuis.

43504. Arthropora bifurcata Ulrich.

Cotypes.

Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 178, pl. 14, figs. 22-25.

43502. Arthropora reversa Ulrich.

Holotype.

Trenton (Ord.) St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv., Minn., Final Rept., III, Pt. I, 1893, p. 178, pl. 14, fig. 26.

43630. Arthropora shafferi (Meek).

Plesiotypes.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 167, pl. 7, figs. 10, 10a.

43503. Arthropora simplex Ulrich. Cotypes and figured sections.

Black River (Ord.). St. Paul and Minneapolis, Minne, sota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I. 1893, p. 177, pl. 14, figs. 12-21.

43636. Arthrostylus conjunctus Ulrich.

Holotype.

Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XII, 1890, p. 189, figs.
 14. 14a-e; Geol. and Nat. Hist. Surv. Minn., Final Rept.,
 III, Pt. I, 1893, p. 188, pl. 3, figs. 13, 14.

43639. Arthrostylus obliquus Ulrich.

Holotype.

Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XII, 1890, p. 190, figs. 14c-d; Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 188, pl. 3, figs. 15, 16.

25499. Artipus?receptus Scudder.

Holotype.

Older Tertiary. White River, Eastern Utah.

Scudder, Mon. XXI, U. S. Geol, Surv., 1893, p. 51, pl. 9, fig. 7.

8576. Asaphiscus wheeleri Meek.

Cotypes.

15460. Middle Cambrian. Near Antelope Springs, Utah.

Meck, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 485. (footnote).—White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV. Pt. I, 1876, p. 43, pl. 2, figs. 1a-1f.—Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 220, pl. 31, figs. 3, 3a.

25698. **Asaphus astragalotes** Green. Plastotype. Middle Ordovician. Greenville Canal, Canada.

Green, Suppl. Mon. Trilobites N. America, Phila., 1835, p. 11. Cast No. 37.

=Ptychopyge astragalotes.

24652. Asaphus caribouensis Walcott.

Cotype.

Upper Pogonip (Ord.). Ridge east of Hamburg Ridge, Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 98, pl. 12, figs. 7-7b.

4963. Asaphus caudatus (Brünnich).

Plastotype

Niagara (Sil.). Ripley, Ohio.

Green, Mon. Trilobites N. America, Phila., 1832, p. 50. Cast No. 17.

=Dalmanites limulurus.

See Asaphus limulurus and A. wetherilli.

4835. Asaphus? crypturus Green.

Plastotype.

Silurian. Moose River, Nova Scotia.

Green, Suppl. Mon. Trilobites N. America, Phila., 1835, p. 18. Cast No. 41.

= Homalonotus crypturus.

24651. Asaphus? curiosa Billings.

Plesiotype.

Upper Pogonip (Ord.). Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 98, pl. 12, fig. 15.

9824. Asaphus emoryi Hall.

Holotype.

Middle Ordovician. Locality not given. Probably from near El Paso, Texas.

Hall, Emory's Rept. U. S. Mexican Bound. Surv., I, Pt. 2, 1857, p. 174, pl. 20, fig. 5.—Walcott, Palæontologia Universalis, Ser. I, Fasc. II, 1903, pls. 28, 28a.

= Isotelus emoryi.

11600. Asaphus (Megalaspis?) goniocercus Meek. Holotype.
? Upper Cambrian. Near Malade City, Utah.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 (1873), p. 480.

17906. Asaphus (Isotelus) iowensis Owen. Cotypes.
Trenton (Ord.). Otter Creek, Turkey River, Iowa.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, p. 577, Tab. IIA, figs. 1, 3, 5, 6.

= Isotelus iowensis.

4880. Asaphus laticostatus Green.

Plastotvr

Schoharie (Dev.). Ulster County, New York.

Green, Mon. Trilobites N. America, 1832, p. 45. Cast No.

= Dalmanites anchiops.

4954. Asaphus limulurus Green.

Plastotype.

Niagara (Sil.). Lockport, New York.

Green, Mon. Trilobites N. America, 1832, p. 48. Cast No. 16.

= Dalmanites limulurus.

See Asaphus caudatus and A. wetherilli.

33458. Asaphus megistos Locke.

Plesiotype.

Richmond (Ord.). Near Oxford, Ohio.

Mickelborough, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, pp. 200-206, text figs. 1-3.—Walcott, Science, III, March 7, 1884, p. 200, fig. 1.

= Isotelus maximus Locke.

4946. Asaphus micrurus Green.

Plastotype.

Helderbergian (Dev.). Trenton Falls, New York.

Green, Mon. Trilobites N. America, 1832, p. 56. Cast No. 19.

= Dalmanites micrurus.

4889. Asaphus myrmecophorus Green.

Plastotype.

Onondaga (Dev.). Genesee County, New York.

Green, Suppl. Mon. Trilobites N. America, 1835, p. 16. Cast No. 40.

=Dalmanites (Coronura) myrmecophorus.

4959. Asaphus platypleurus Green.

Plastotype.

? Hamilton (Dev.). Huntingdon County, Pennsylvania.

Green, Amer. Journ. Sci., XXXII, 1837, p. 169. Cast No. 52.

4958. Asaphus pleuroptyx Green.

Plastotype.

Helderbergian (Dev.). Helderberg Mountains, New York. Green, Mon. Trilobites N. America, 1832, p. 55. Cast No. 18.

= Dalmanites pleuroptyx.

25697. Asaphus selenurus (Eaton).

Plastotype.

Onondaga (Dev.). Probably Ulster County, New York.

Green, Mon. Trilobites N. America, 1832, p. 46. Cast Nos. 14, 15.

= Dalmanites (Odontocephalus) selenurus.

1176. Asaphus (Isotelus) susæ (Whitfield).

Plesiotype.

Trenton (Ord.). "Selkirk Settlement," Lower Fort Garry.

Manitoba, Canada.

Whiteaves, Paleozoic Fossils III, Pt. 3, 1897, p. 231.

4948. Asaphus tetragonocephalus Green.
Ordovician. New York (? Newport).

Plastotype.

Green, Suppl. Mon. Trilobites N. America, 1835, p. 12. Cast No. 39. 25699. Asaphus wetherilli Green.

Plastotype.

Niagara (Sil.). Rochester, New York.

Green, Mon. Trilobites N. America, 1832, p. 57. Cast No. 20.

= Dalmanites limulurus.

See Asaphus caudatus and A. limulurus.

- 43136. Ascodictyon floreale Ulrich and Bassler. Holotype. Hamilton (Dev.). Two miles west of Alpena, Michigan.

  Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLV, 1904, p. 288, pl. 68, fig. 13.
- 48143. Ascodictyon parvulum Ulrich and Bassler. Holotype. Chester (Miss.). Jackson County, Kentucky.

  Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLV, 1904.
- p. 288, pl. 68, fig. 14.

  43135. Ascodictyon siluriense Vine. Plesiotypes.
  43138. Rochester (Sil.). Lockport, New York.
  Waldron (Sil.). Waldron, Indiana.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLV, 1904, p. 286, pl. 68, figs. 11, 12.

- 43142. Ascodictyon sparsum Ulrich and Bassler. Holotype. Chester (Miss.). Claxton, Caldwell County, Kentucky.

  Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLV, 1904, p. 289, pl. 68, fig. 15.
- 43137. Ascodictyon stellatum Nicholson and Ethridge, jr.
  Plesiotype.
  Hamilton (Dev.). Eighteen Mile Creek, New York.
  Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLV, 1904, p. 287, pl. 68, figs. 9, 10.
- 163959. Aspella senex Dall. Holotype.
  Pliocene. Shell Creek, Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl.
  60, fig. 14.
- 43632. Aspidopora areolata Ulrich. Cotypes and figured sections. Utica (Ord.). First Ward, Cincinnati, Ohio.

  Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 164, pl. 7, figs. 2, 2a-c.
- 45499. Aspidopora elegantula Ulrich. Cotypes.
  Trenton (Ord.). Kenyon, Minnesota.

  Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I,
  1893, p. 256, pl. 17, figs. 13-21.
- 44051. Aspidopora parasitica Ulrich. Cotypes and figured sect\*
  Black River (Ord.). Fountain, Minnesota.

  Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III
  1893, p. 255, pl. 17, figs. 26-32.

109280. Astarte (Goodallia?) americana Dall. Holotype. Claiborne (Eocene). Claiborne, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1496, pl. 56, fig. 5

162527. Astarte (Crassinella) branneri Arnold. Holotype.
Pleistocene. Los Cerritos, California.

Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 127, pl. 18, fig. 12.

23053. Astarte californica Stanton. Cotypes.

Knoxville (Lower Cret.). Near Stephenson, Tehama
County, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 57, pl. 6, figs. 19-21.

23052. Astarte corrugata Stanton. Cotypes.

Knoxville (Lower Cret.). Five miles north of Paskenta,
California.

Stanton, Bull No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 56, pl. 6, fig. 16.

111600. Astarte distans Conrad. Plesiotype.

Miocene. Shiloh, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 53. pl. 7. figs. 13-17,

3418. Astarte (distans var.?) floridana Dall. Holotype.
Miocene. Alum Bluff, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., II. Pt. VI, 1903. p. 1493, pl. 57, fig. 19.

12343. Astarte evansi (Hall and Meek). Plesiotypes.
Fort Pierre (Cret.). Cheyenne River, near Rapid Creek,
Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 413, pl. 11, fig. 13.

199. Astarte fragilis Meek and Hayden. Cotypes.

Jurassic. Southwest base of Black Hills, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1860, p. 183: Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV. 1864, p. 94.

3593. Astarte gemma Dana. Holotype.
Carboniferous. Wollongong Point, district of Illawarra.
New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 688, Atlas, pl. 3, figs. 4a, 4b.

109313. Astarte glenni Dall. Holotype. Miocene. Darlington District, South Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903. p. 1490.

332. Astarte gregaria Meek and Hayden. Holotype and paratypes.

Montana (Cret.). Yellowstone River, near Miles City, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 84.

=Eriphyla gregaria.

202. Astarte inornata Meek and Hayden. Holotype.

Jurassic. Southwest base of Black Hills, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1860, p. 183; Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 94, pl. 3, figs. 12a, 12b.

28936. Astarte meeki Stanton.

Cotypes.

28937. Jurassic. Yellowstone National Park.

Stanton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 620, pl. 73, figs. 3-5.

135062. Astarte opulentora Dall.

Holotype.

Pliocene. Tehuantepec Railway, 70 kilometers west of Atlantic terminus.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1494, pl. 57, fig. 11.

8361. Astarte packardi White.

Plastotype.

Jurassic. Como Station, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883), Pt. I, p. 149, pl. 37, figs. 6a, 6b.

145978. Astarte (Ashtarotha) parma Dall.

Holotype.

Older Miocene. Skipton, Maryland.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1493, pl. 57, fig. 22.

109314. Astarte protracta (Meyer).

Plesiotype.

Claiborne (Eocene). Clail rne, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, pl. 43, fig. 3.

= Lirodiscus protractus.

9829. Astarte texana Conrad.

Holotype.

Cretaceous. Western Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 152, pl. 5, fig. 9.

23054. Astarte trapezoidalis Stanton. Holotype and paratypes.

23104. Knoxville (Lower Cret.). Three miles south of Lowrevs. Tehama County, and near Reiff. Lake Co

reys, Tehama County, and near Reiff, Lake Cc California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1891 pl. 6, figs. 17, 18.

146121. Astarte undulata vaginulata Dall. Cotypes.

Miocene. Grove Wharf, James River, Virginia.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1491.

135849. **Astarte wagner**i Dall. Holotype. Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1488, pl. 57, fig. 20.

9383. Astartella gurleyi White.

Holotype.

Upper Carboniferous. Danville, Illinois.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883), Pt. I, p. 166, pl. 42, figs. 6a, 6b.

3591. Astartila? corpulenta Dana. Holotype. Carboniferous. District of Illawarra, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 691, Atlas, pl. 3, figs. 3a-c.

3592. Astartila cyclas Dana.

Cotypes.

Carboniferous. Wollongong Point, Illawarra, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 690, Atlas, pl. 4, figs. 3, 3a-e.

3588. Astartila cyprina Dana.

Cotypes.

3677. Carboniferous. Wollongong Point, Illawarra, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 689, Atlas, pl. 3, figs. 6-6f, 7a, 7b.

3586. Astartila cytherea Dana.

Cotypes.

Carboniferous. Wollongong Point, Illawarra, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 689, Atlas, pl. 4, figs. 1, 1a-g.

3594. Astartila intrepida Dana.

Holotype.

Carboniferous. Wollongong Point, Illawarra, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 689, Atlas, pl. 3, figs. 5, 5a-c.

3589. Astartila polita Dana.

Cotypes.

Carboniferous. Black Head, Illawarra, New South Wales,
Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 690, Atlas, pl. 4, figs. 2, 2a-c.

3598. Astartila transversa Dana.

Holotype.

i

Carboniferous. Wollongong Point, Illawarra, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 690, Atlas, pl. 4, figs. 4-4d.

39914. Asterias antiqua Troost.

Chirotype.

Ordovician. Harpeth River, Davidson County, Tennessee. Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 59.

12325. Asterias? dubium Whitfield. Cotype.

Jurassic. East side Spearfish Creek, near Junction with
the Redwater. Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources, Black Hills, Dakota, 1880, p. 344, pl. 3, fig. 3.—Clark, Bull. No. 97, U. S. Geol. Surv., 1893, p. 31, pl. 5, fig. 2.

112994. Astralium (Lithopoma) chipolanum Dall. Cotypes. Oligocene. Alum Bluff, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 384, pl. 18, fig. 6a.

112993. Astralium (Lithopoma) precursor Dall. Holotype.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 384, pl. 18, fig. 8.

158281. Astrangia expansa Vaughan.

Cotypes.

158285. Jacksonian (Eocene). Jackson, Mississippi, and Montgomery, Louisiana.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 133, pl. 14, figs. 3-5.

158289. Astrangia harrisi Vaughan.

Cotypes.

Jacksonian (Eocene). Near Vinces Bluff, Saline River, Cleveland County, Arkansas.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 136, pl. 14, figs. 8, 9.

158288. Astrangia ludoviciana Vaughan. Paratype. Jacksonian (Eocene) Montgomery, Louisiana.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 135, pl. 14, fig. 7.

158291. Astrangia wilcoxensis Vaughan. Holotype. Midway (Eocene). Eastern Wilcox County, Alabama. Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 137, pl. 14, figs. 11, 11a.

39913. Astrios tennesseæ Troost. Chirotype.

Mississippian. Cannon County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 59. [A siliceous geode probably after some Agaricocrinus.]

158315. Astrocœnia pumpellyi Vaughan. Holotype.
Upper Oligocene. Russell's Spring, Flint River, Decatur
County, Georgia.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 149, pl. 17, figs. 7, 7a.

13337. Astrodapsis antiselli Conrad.

Cotypes.

Miocene. Estrella, California.

Conrad, Rept. Expl. and Surveys R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 196, pl. 10, figs. 1, 2.

158229. Astrohelia burnsi Vaughan.

Cotypes.

Jacksonian (Eocene). Jackson, Mississippi.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 115, pl. 10, figs. 3-3b.

158223. Astrohelia neglecta Vaughan.

Cotypes.

Red Bluff (Oligocene). Red Bluff, Mississippi.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 114, pl. 9, figs. 14, 15.

46547. Astylospongia praemorsa pusilla? Hall. Plesiotypes. Waldron (Sil.). Waldron, Indiana.

Rauff, Palaeontographica, XL, 1894, p. 309.

107387. Astyris perfervida Dall.

Holotype.

Oligocene. Oak Grove, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, pl. 41, fig. 10.

130350. Astyris turgidula Dall.

Holotype.

Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, pl. 40, fig. 12b.

23869. Asymptoceras newloni Hyatt.

Holotype.

Upper Carboniferous. Oswego, Kansas.

Hyatt, Second Ann. Rept. Geol. Surv., Texas, 1891, p. 346, text figs. 48, 49.

43193. Atactopora angularis Ulrich and Bassler. Holotype and figured sections.

Richmond (Ord.). Waynesville, Ohio.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 32, pl. 8, figs. 10-12.

43619. Atactopora hirsuta Ulrich. Holotype and figured sections. Utica (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 120, pl. 12, figs. 3-3b.—Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 31, pl. 8, fig. 14.

43620. Atactopora maculata Ulrich. Holotype and figured sections. Lorraine (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 121, pl. 12, figs. 2-2c.—Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 31, pl. 8, fig. 13.

43626. Atactopora multigranosa Ulrich.

Holotype.

Lorraine (Ord.). Hamilton, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 122, pl. 12, figs. 5-8.

=Atactoporella multigranosa.

43623. Atactopora mundula Ulrich. Holotype. Lorraine (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 123, pl. 12, figs. 4, 4a.

- =Atactoporella mundula.
- 43621. Atactopora septosa Ulrich. Cotypes and figured sections. Lorraine (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 125, pl. 12, figs. 7-7c.

=Amplexopora septosa.

43663. Atactopora subramosa Ulrich. Holotype. Richmond (Ord.). Jacksonburg, Butler County, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 124, pl. 12, figs. 6-6c.

= Heterotrypa subramosa.

43624. Atactopora tenella Ulrich. Holotype.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XI, 1879, p. 123, pl. 12, figs. 5, 5a.

- =Atactoporella tenella.
- 43501. Atactoporella crassa Ulrich. Holotype and figured sections. Trenton (Ord.). Near Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 225, pl. 15, figs. 18-21.

43805. Atactoporella insueta Ulrich. Cotypes and figured sections. Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 224, pl. 18, figs. 5-8.

43626. Atactoporella multigranosa (Ulrich). Figured sections of holotype.

Lorraine (Ord.). Hamilton, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 254, pl. 12, figs. 8, 8a.

See Atactopora multigranosa.

43734. Atactoporella mundula (Ulrich). Figured section of plesiotype.

Lorraine (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 252, pl. 12, figs. 6, 6a.

See Atactopora mundula.

43627. Atactoporella newportensis Ulrich. Cotypes and figr

Utica (Ord.). Newport, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 250, p. figs. 4-4b.

43629. Atactoporella ortoni (Nicholson). Figured section of plesiotype.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 256, pl. 12, figs. 7, 7a.

43500. Atactoporella ramosa Ulrich. Cotypes and figured sections.

Black River (Ord.). Near Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 226, pl. 20, figs. 22-27.

43628. Atactoporella schucherti Ulrich. Figured sections of holotype.

Richmond (Ord.). Oxford, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 251, pl. 12, figs. 5-5b.

43625. Atactoporella typicalis Ulrich. Cotypes and figured sections. Utica (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1983, p. 248, pl. 12, figs. 3-3d.

43806. Atactoporella typicalis præcipta Ulrich. Cotypes and figured sections.

Black River (Ord.). St. Paul and Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III. Pt. I, 1893, p. 223, pl. 15, figs. 16, 17; pl. 18, figs. 1-4.

14233. Athyris claytoni Hall and Whitfield. Cotypes. ? Waverly (Miss.). Little Cottonwood, Wahsatch Range, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV. Pt. II, 1877, p. 256, pl. 4, figs. 15-17.

=Seminula claytoni.

8826. Athyris coloradoensis Girty. Cotypes.

14441. Ouray (Upper Dev.). Ouray limestone at many localities

33950 in Central Colorado.

to Girty, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 46, 33955. pl. 5, figs. 5-11.

14339. Athyris hirsuta Hall. Plesiotype.

Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 222, pl. 18, fig. 5. = Cliothyris hirsuta.

35196. Athyris lamellosa (L'Eveillé). Plesiotype.
Madison (Miss.). Yellowstone National Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 561, pl. 71, fig. 7a.

14476. Athyris? persinuata Meek. Cotypes.

Upper Carboniferous. White Pine Mountains, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 81, pl. 9, figs. 4-4b.

=Seminula persinuata.

14234. Athyris planosulcata Phillips.?

Plesiotypes.

Waverly? (Miss.). Cottonwood Divide, Wahsatch Range, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 257, pl. 4, figs. 10, 11.

14475. Athyris roissyi (L'Eveillé)? Plesiotypes. Upper Carboniferous. Ruby Valley Range, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 82, pl. 9, figs. 3-3b.

[The surface of these shells is not spinose as it should be for this species, but is somewhat lamellose. It is probably a new species of Seminula.]

14338. Athyris roissyi (L'Eveillé).

Plesiotype.

Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 280, pl. 18, figs. 9, 9a.

=Cliothyris roissyi.

14232. Athyris subquadrata Hall?

Plesiotypes.

Lower Carboniferous. Snowstorm Hill, near Dry Canyon, Oquirrh Mts., Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 271, pl. 5, figs. 19, 20.

=Seminula subquadrata.

14472. Athyris subtilita Hall.

Plesiotypes.

Upper Carboniferous. White Pine District, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 83, pl. 8, figs. 6, 6a.

=Seminula argentea.

6610. Athyris subtilita Hall.

Plesiotypes.

6801. Upper Carboniferous. Rock Bluffs and Plattsmouth, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Neb. (Hayden), p. 180, pl. 1, fig. 12; pl. 5, fig. 9.

=Seminula argentea.

647. Athyris subtilita Hall.

Plesiotypes.

Upper Carboniferous. Near Humboldt Mountains, Ne

Meek, Rept. Expl. Great Basin of Utah, Simpson, 1876, pl. 2, figs. 4a, 4b.

33956. Athyris vittata Hall var. Plesiotype.
Ouray (Upper Dev.). Engineer Mountain, Colorado.

Girty, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 47, pl. 5, fig. 12.

34127. Athyris vittata triplicata Girty. Holotype.

Three Forks (Dev.). Soda Butte Creek, Yellowstone
National Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 504, pl. 66, figs. 4a, 4b, 4c.

23075. Atresius liratus Gabb.

Plesiotypes.

Knoxville (Lower Cret.). One mile northwest of Palmer's Rauch, Lake County, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 68, pl. 11, fig. 6.

135834. Atrina (argentea var.?) chipolana Dall. Cotypes. Oligocene. Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 662.

145988. Atrina harrisii Dall. Holotype. Miocene. Jones Wharf, Patuxent River, Maryland.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 663, pl. 29, fig. 11.

137831. Atrina jacksoniana Dall. Cotypes. 136645. Eocene. Garlands Creek, Clarke County, and Jackson,

Mississippi.
Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 662.

Atrypa (n. s.?) Owen, 1852=Pentamerella dubia Hall.

1166. Atrypa aspera (Schlotheim). Plesiotypes.
Base of Upper Devonian. Anderson River, Mackenzie
River Basin, Canada.

Meek, Trans. Chicago Acad. Sci. I, 1868, p. 96, pl. 13, fig. 12.

633. Atrypa aspera (Schlotheim). Plesiotypes. Upper Devonian. Neils Valley, east of Eureka, Nevada.

Meek, Rept. Expl. Great Basin of Utah, Simpson, 1876, p. 348, pl. 1, figs. 2-2b.

17928. Atrypa comis Owen.

Middle Devonian. Near Davenport, Iowa.

Holotype.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, p. 583, tab. III A, fig. 4.

=Gypidula comis.

13848. Atrypa desquamata Sowerby. Plesiotype.
Middle Devonian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 150, pl. 14, figs. 4, 4a.

=Atrypa missouriensis.

See Atrypa reticularis Meek, 1877.

14019. Atrypa missouriensis Miller. Plesiotypes. 13848. Three Forks (Dev.). Lone Mountain and Piñon Station, Nevada.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 502, pl. 66. figs. 2a-c.

See Atrypa desquamata Walcott, and A. reticularis Meek (partim.).

Base of Upper Devonian. Anderson River, Mackenzie River Basin, Canada.

Meek, Trans. Chicago Acad. Sci., I, 1868, p. 97, pl. 13, figs. 13a, 13b.

631. Atrypa reticularis (Linnæus). Plesiotypes.

14019. Upper Devonian. West side of Buell Valley, east of Eureka, and Treasure Hill, White Pine District, Nevada.

Meek, Rept. Expl. Great Basin Utah, Simpson, 1876, p. 347, pl. 1, figs. 6-6b; Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 38, pl. 1, figs. 7-7a.

Atrypa missouriensis.See Atrypa desquamata.

13845. Atrypa reticularis (Linnæus). Plesiotypes.
14019. Three Forks (Dev.). Eureka and White Pine Districts,
Nevada.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 502, pl. 66, figs. 1a, 1b, 1c.

1 3845. Atrypa reticularis (Linnæus). Plesiotype.

Middle and Upper Devonian. Eureka District, Nevada.

Walcott, Mon, VIII, U. S. Geol Surv., 1884, p. 150, pl. 14, figs.

6-6b.

113892. Atys (Acrostemma) gracilis Dall. Cotypes.
Oligocene. Calhoun County, Florida.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 29; Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 59, fig. 15.

61563. Atys obscurata Dall. Cotypes.
113893. Oligocene and Miocene. Alum Bluff, Florida, and Bowden,
Jamaica, British West Indies.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 30; Trans. Wagner Free Inst. Sci. Phila., III. Pt. VI, 1903, pl. 59, fig. 4.

Cotypes. Chipola (Oligocene). Chipola River, Florida.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 28; Trans. Wagner Free Inst. Sci. Phila., III. Pt. VI, 1903, pl. 59, fig. 21.

106971. Atys (Acrostemma) salina Dall. Holotype.
Lisbon (Eocene). Head of Saline Bayou, St. Maurice.
Winn Parish, Louisiana.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 29; Trans. W Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 59, fig. 14. 30198. Aucella aviculæformis Hyatt. Cotypes.

Jurassic. Near Reynolds Ferry, six miles from Copperopolis, California.

Hyatt, Bull. Geol. Soc. Amer., V, 1894, p. 433.

30199. Aucėlia aviculæformis acuta Hyatt. Cotypes.

Jurassic. Near Reynolds Ferry, six miles from Copperopolis, California.

Hyatt, Bull. Geol. Soc. Amer., V, 1894, p. 433.

21663. Aucella concentrica Keyserling. Plesiotypes. Knoxville (Lower Cret.). Near Knoxville, California.

White, Mon. XIII, U. S. Geol. Surv., 1889, p. 232, pl. 4, figs. 18, 19, 20.

= Aucella piochii.

21663. Aucella concentrica Keyserling. Plesiotypes. Knoxville (Lower Cret.). Near Knoxville, California.

White, Mon. XIII, U. S. Geol. Surv., 1889, p. 232, pl. 4, figs. 16, 17.

= Aucella crassicollis.

21660. Aucella concentrica Fischer. Plesiotypes. Knoxville (Lower Cret.). State of Washington.

White, Mon. XIII, U. S. Geol. Surv., 1889, p. 232, pl. 4, fig. 21.

= Aucella crassicollis.

12360. Aucella concentrica Fischer (variety). Plesiotype.

Lower Cretaceous? Fossil Point, Port Möller, Alaska.

White, Bull. No. 4, U. S. Geol. Surv., 1884, p. 13, pl. 6, figs. 2-12; Mon. XIII, U. S. Geol. Surv., 1889, p. 232, pl. 4, figs. 11-15.

= Aucella crassicollis.

21663. Aucella crassicollis Keyserling. Plesiotypes.
23034 Knoxville (Lower Cret.). Between Elder Creek and Paskenta, and near Stephenson, Tehama County, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 45, pl. 5, figs. 1-13; pl. 6, figs. 2-5.

See Aucella concentrica, 12360, 21660, 21663.

30196. Aucella elongata Hyatt. Cotypes.
30197. Jurassic. Stanislaus River, opposite Bostwick's bar, California.

Hyatt, Bull. Geol. Soc. Amer., V, 1894, p. 431.

30195. Aucella elongata orbicularis Hyatt. Holotype.
Jurassic. Bostwick's bar, Stanislaus River, California.

Hyatt, Bull. Geol. Soc. Amer., V, 1894, p. 432.

7831. Aucella erringtoni Gabb. Plesiotypes.

Jurassic. Mariposa Estate, California.

Meek, Geol. Surv. Calif., Geology, I, 1865, p. 479, pl. 1, figs. 2a [5e].

- 30200. Aucella erringtoni arcuata Hyatt. Cotypes.

  Jurassic. Tuolumne River, at Moffat's bridge, California.

  Hyatt, Bull. Geol. Soc. Amer., V, 1894, p. 430.
- 30194. Aucella orbicularis Hyatt. Cotypes.

  Jurassic. Calaveras County, California.

  Hyatt, Bull. Geol. Soc. Amer., V, 1894, p. 434.
- 12660. Aucella pallasii Keyserling. Plesiotypes.

  Jurassic. Near Moscow, Russia.

  White, Mon. XIII, U.S. Geol. Surv., 1889, p. 231, pl. 3, figs. 10, 11.

  =Aucella mosquensis.
- 21659. Aucella pallasii var. Keyserling. Plesiotypes.
  Jurassic. Near Moscow, Russia.
  White, Mon. XIII, U. S. Geol. Surv., 1889, p. 231, pl. 3, figs. 12, 13.

  = Aucella mosquensis.
- 23030 Aucella piochii (Gabb). Plesiotypes.
  to Knoxville (Lower Cret.). South Fork of Elder Creek,
  23032. Tehama County, and near Knoxville and Paskenta,
  California.
  Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 42,
  pl. 4, figs. 2-10.
  See Aucella concentrica, 21663.
- 23033. Aucella piochii ovata Stanton. Cotypes.
  Knoxville (Lower Cret.). South Fork of Elder Creek,
  Tehama County, California.

  Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 43,
  pl. 4, figs. 11-14.
- 25543. Aulobaris anicilla Scudder. Cotype.
  Older Tertiary. Roan Mountains, western Colorado.
  Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 137, pl. 12, fig. 1.
- 25545. Aulobaris circumscripta Scudder. Cotypes. Older Tertiary. Roan Mountains, western Colorado.

  Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 137, pl. 12, fig. 5.
- 25544. Aulobaris comminuta Scudder. Cotype.
  Older Tertiary. White River, eastern Utah.
  Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 138, pl. 12, fl

14544. Aulophyllum? richardsoni Meek. Cotypes.

Base of Upper Devonian. Ramparts of the Mackenzie
River, Canada.

Meek. Trans. Chicago Acad. Sci., I, 1868, p. 81, pl. 11, figs. 3, 3a. = Cyathophyllum richardsoni.

14976. Aulopora annectens Clarke. Holotype.
Naples (Dev.). Whale's Back, Canandaigua Lake, New
York.

Clarke, Bull. No. 16, U. S. Geol. Surv., 1885, p. 63, pl. 3, fig. 15.

35162. Aulopora geometrica Girty. Holotype.

Madison (Miss.). Bighorn Pass, Gallatin Range, Yellowstone National Park.

Girty, Mon. XXXII, U. S. Geol. Surv., Pt. II, 1899, p. 508, pl. 67, fig. 6a.

22334. Auricula neumayri White. Cotypes.

Bear River (Cret.). Twenty miles north of Cokeville,
Wyoming.

White, Bull. No. 128, U. S. Geol. Surv., 1895, p. 41, pl. 5, fig. 1.

291. **Avalana subglobosa** Meek and Hayden. Holotype. Fox Hills (Cret.). Moreau River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 64. = Cinulia (Oligoptycha) concinna.

18333. Avalonia manuelensis Walcott. Holotype.
Lower Cambrian. Conception Bay, Newfoundland.
Walcott, Proc. U. S. Nat. Mus., XII, 1889, p. 44; Tenth Ann.

Rept. U. S. Geol. Surv., 1890, p. 646, pl. 95, figs. 3, 3a.

33553. Avicula bellula Hall.

Coeymans (Dev.). Albany County, New York.

Hall, Nat. Hist. N. Y., Pal. III, 1859, p. 289, pl. 53, fig. 8.

= Aviculopecten bellula.

15073. Avicula? custa Hall. Cotypes-Upper Carboniferous. La Bonté, Laramie County, Wyoming.

Hall, Stansbury's Expl. and Surv. Valley Great Salt Lake. Utah, 1852, p. 412, pl. 2, figs. 1a, b.

460. Avicula? fibrosa Meek and Hayden. Holotype and paratypes.

Fort Pierre (Cret.). Forks of Cheyenne River, South
Dakota.

Meck and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 86. See Pteria (Pseudopteria) fibrosa.

22866. Avicula gastrodes Meek.

Plesiotypes.

Colorado (Cret.). Poison Canyon and William's Creek, Huerfano Park, Colorado.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 72, pl. 9, figs.

See Pteria (Oxytoma) erecta, and P. (O.?) gastrodes.

7789. Avicula (Oxytoma?) gastrodes Meek.

Holotype.

Colorado (Cret.). Coalville, Utah.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 (1873), p. 491. See Pteria (Oxytoma?) gastrodes.

46094. Avicula hermione Billings.

Plastotype.

Trenton (Ord.). Montreal, Canada.

Billings, Paleozoic Fossils, Geol. Surv. Canada, 1865 (Advance Sheet, 1862), p. 40, fig. 42.

6514. Avicula longa (Geinitz).

Plesiotypes.

Upper Carb. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv., Nebr. (Hayden), 1872, p. 199, pl. 9, fig. 8.

1803. Avicula mucronata Meek and Hayden.

Cotypes.

Jurassic. Wind River Valley, Wyoming.

Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 81.

=Avicula wyomingensis.

See Pteria munsteri.

12342. Avicula (Oxytoma) mucronata Meek and Hayden. Cotypes. Jurassic. Two miles south of Belle Fourche River, near Bear Lodge Butte, Black Hills, South Dakota.

> Whitfield, Rept. Geol. and Resources Black Hills, Dakota, 1880, p. 357, pl. 4, figs. 1, 2.

=Avicula (Oxytoma) wyomingensis.

See Pteria munsteri.

7788. Avicula (Pseudoptera) propleura Meek. 7790.

Cotypes.

Colorado (Cret.). Coalville, Utah.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 (1873), p. 489.

=Gervillia propleura.

7888. Avicula (Pseudoptera) rhytophora Meek. Colorado (Cret.). Coalville, Utah.

Cotypes.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 (1873), p. 490.

=Gervillia propleura.

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7790.

461. Avicula subgibbosa Meek and Hayden. Holotype. Fox Hills (Cret.). Long Lake, North Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1860, p. 180. = Avicula linguiformis subgibbosa.

205. Avicula (Monotis) tenuicostata Meek and Hayden.

Cotypes.

Jurassic. Black Hills, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1858, p. 50. = Eumicrotis curta.

3660. Avicula volgensis Verneuil? Plesiotype.
Carboniferous. Wollongong Point, Illawarra, New South
Wales. Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 704, Atlas pl. 9, fig. 4.

23029. Avicula (Oxytoma) whiteavesi Stanton. Holotype.

Knoxville (Lower Cret.). Five miles north of Paskenta,
California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 38, pl. 4, fig. 1.

14353. Aviculopecten affinis Walcott. Cotype.

Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 229, pl. 19, figs. 1, 1a.

8189. Aviculopecten? altus White. Holotype.

Triassic. Twenty miles west of John Gray's Lake, Southeastern Idaho.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terrs., Pt. I, 1878 (1883), p. 110, pl. 32, fig. 3a.

12547. Aviculopecten (Eumicrotis?) augustensis Hall and Whitfield. Holotype.

Jurassic. Shoshone Springs, Augusta Mountains, Nevada.
Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 288, pl. 7, fig. 15.

14179. Aviculopecten catactus Meek. Cotypes. Lower Carboniferous. White Pine Mountains, near Hamilton, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 93-pl. 3, figs. 10, 10a, (?10b).

6508. Aviculopecten carboniferous (Stevens). Plesiotypes.
Upper Carboniferous. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Neb. 1872, p. 193, pl. 4. fg. 8; pl. 9, figs. 4a, 4b.—White, Thirteenth Ann. Rept. Geol. Surv. Indiana, 1884, p. 144, pl. 28, figs. 5, 6.

8522. Aviculopecten coreyanus White. Cotypes.
Upper Carboniferous. East of Mt. Taylor, near Pajuate,
New Mexico.

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 8 vo., 1874, p. 21; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1877, p. 147, pl. 11, figs. 1a, 1b.

6947. Aviculopecten coxanus Meek and Worthen. Plesiotypes. Upper Carboniferous. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Neb. (Hayden), 1872, p. 196, pl. 9, figs. 2a, 2b.

15217. Aviculopecten curtocardinalis Hall and Whitfield. Cotypes: Either Permian or Triassic. Southeast of Salt Lake City, Wahsatch Range, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 273, pl. 6, fig. 4.

14354. Aviculopecten eurekensis Walcott. Cotype.

Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U.S. Geol. Surv., 1884, p. 227, pl. 19, figs. 2, 3.

14355. Aviculopecten haguei Walcott. Cotype.

Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 226 pl. 19, fig. 4.

8187. Aviculopecten? idahoensis Meek. Plesiotypes.
Triassic. Five miles west of John Gray's Lake, Southeastern Idaho.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883), Pt. I, p. 110, pl. 32, fig. 2a.

8187. Aviculopecten (Pseudomonotis?) idahoensis Meek.
Holotype.

Triassic. Lincoln Valley, near Fort Hall, Idaho.

Meek, Fifth Ann. Rept. U. S. Geol. Surv. Terr., 1872, p. 374.

8520. Aviculopecten? interlineatus Meek and Worthen.

Plesiotype.

Upper Carboniferous. Confluence of White Mountain and Black rivers, Arizona.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 149, pl. 11, fig. 3a.

35298. Aviculopecten? interlineatus Meek and Worthen.

Plesiotype.

Maroon (Upper Carb.). Ouray, Colorado.

Girty, Prof. Pap. 16, U. S. Geol. Surv., 1903, p. 416, pl. 8, fig. 3.

2521. Aviculopecten maccoyi Meek and Hayden. Holotype.
Permian. South Cottonwood Creek, Kansas.

Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Km No. 172, XIV, 1864, p. 50, pl. 2, fig. 9. 8484. Aviculopecten maccoyi Meek and Hayden. Plesiotype.
Upper Carboniferous. Near Bear Spring, Camp Wingate,
New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 149, pl. 11, fig. 2a.

6502. Aviculopecten neglectus (Geinitz). Plesiotypes. Upper Carboniferous. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Neb. (Hayden), 1872, p. 193, pl. 9, fig. 1b.

=Euchondria neglecta.

46368. Aviculopecten oblongus Meek and Worthen. Keokuk (Miss.). Warsaw, Illinois.

Meek and Worthen, Geol. Surv. III., II, 1866, p. 258, pl. 18, figs. 3a, b.

15215. Aviculopecten occidaneus Meek. Cotypes.
Upper Carboniferous. Weber Canyon, Wahsatch Range,
Utah.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 96, pl. 12, figs. 13-13b.

21716. Aviculopecten occidentalis (Shumard). Plesiotype.
Permian. Military crossing of the Big Wichita, Baylor
County, Texas.

White, Bull. No. 77, U. S. Geol. Surv., 1891, p. 29, pl. 4, fig. 1.

24536. Aviculopecten occidentalis (Shumard). Plesiotypes.
Upper Carboniferous. Fort Apache, Navajo County, Arizona

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 146, pl. 12, figs. 8a, 8b.

35299. Aviculopecten occidentalis Shumard. Plesiotype.
Rico (Upper Carb.). Silver Creek, Rico Quadrangle,
Colorado.

Girty, Prof. Pap. 16, U. S. Geol. Surv., 1903, p. 414, pl. 8, fig. 1.

15218. Aviculopecten parvulus Hall and Whitfield. Cotypes. Either Permian or Triassic. Southeast of Salt Lake City, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II. 1877, p. 274, pl. 6, fig. 6.

8188. Aviculopecten? pealei White. Holotype.

Triassic. Five miles west of John Gray's Lake, Southeastern Idaho.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883). Pt. I, p. 109. pl. 32. fig. 4a.

14356. Aviculopecten peroccidens Walcott. Cotype.

Lower Carboniferous. Eureka District, Nevada.

Walcott Now VIII I. S. Gool, Surv. 1884 p. 207 pl. 8 fg. 8

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 227, pl. 8, fig. 8.

14357. Aviculopecten pintöensis Walcott. Cotype.

Lower Carboniferous. Near Pinto Peak, Eureka District,

Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 228, pl. 8, fig. 6.

8173. Aviculopecten? superstrictus White. Holotype Jurassic?. Head of Lincoln Valley.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883), Pt. I, p. 144, pl. 37, figs. 4a, 4b.

651. Aviculopecten utahensis Meek. Cotype.
Upper Carboniferous. Summit Spring Pass, east of Eureka,
Nevada.

Meek, Rept. Expl. Great Basin of Utah, Simpson, 1876, p. 354, pl. 1, fig. 9a.

See Pecten utahensis.

15210. Aviculopecten weberensis Hall and Whitfield. Holotype. Either Permian or Triassic. Southeast of Salt Lake City, Wahsatch Range, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 273, pl. 6, fig. 5.

6983. Aviculopecten whitei Meek. Cotypes. Upper Carboniferous. Morton's Shaft, Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Neb. (Hayden), 1872, p. 195, pl. 4, figs. 11a-c.

7458. Aviculopecten? williamsi Meek. Cotypes.
Chouteau (Miss.). Chouteau Springs, Boone County,
Missouri.

Meek, Proc. Acad. Nat. Sci. Phila., 1871, p. 178.

6507. Aviculopinna americana Meek. Cotypes.
Upper Carboniferous. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Neb. (Hayden), 1872, p. 197,
pl. 9, figs. 12a-d.

35300. Aviculopinna nebraskensis Beede. Plesiotypes.
Rico (Upper Carb.). Scotch Creek, Rico Quadrangle,
Colorado.

Girty, Prof. Pap. 16, U. S. Geol. Surv., 1903, p. 435, pl. 9, figs. 1, 2.

Axinæa. See Axinea.

13358. Axinea barbarensis Conrad. Holotype. Miocene. Ranch Triumpho, Los Angeles, California.
Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 194, pl. 6, fig. 3.

9005. Axinea holmesiana White. Coty

Montana (Cret.). Point of Rocks, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1 Pt. I, p. 59, pl. 20, figs. 2a, 2b.

=Pectunculus holmesianus.

111617. Axinea lentiformis (Conrad)?

Plesiotype.

Miocene. Shiloh, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 49, pl. 7, figs. 5, 6.

7935. Axinea profunda Dall.

Cotypes.

Pliocene. San Diego, California.

Dall, Proc. U. S. Nat. Mus., I, 1878, p. 13.

309. Axinea subimbricata (Meek and Hayden). Cotypes. Fox Hills (Cret.). Heart River, North Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 95, pl. 28, figs. 14b-d.

See Pectunculus subimbricatus.

8045. Axinea wyomingensis Meek.

Holotype.

Montana (Cret.). Cooper Creek, Laramie Plains, Wyoming.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 149, text figs. 2, 3 on p. 150.

= Pectunculus wyomingensis.

3960 Axinus (Schizodus) ovatus Meek and Hayden. Holotype.
Permian. Cottonwood Creek, Kansas.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1858, p. 262.

=Schizodus ovatus.

43404. Bactropora simplex Ulrich. Cotypes and figured sections. 43405. Keokuk (Miss.). Warsaw and Nauvoo, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 663, pl. 70, figs. 14-14b; pl. 71, figs. 6-6a.

1934. Baculites anceps obtusus Meek. Cotypes. Fox Hills (Cret.). Deer Creek, North Platte, Wyoming.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 406, text figs.

57-60.

Fox Hills (Cret.) Mouth of Judith River, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 404, pl. 39.

ek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 404, pl. 39, figs. 10a, 10d.

22936. Baculites asper Morton? Plesiotypes. Colorado (Cret.). Cinnabar Mountain, Montana.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 167, pl. 36, figs. 4, 5.

1916. Baculites baculus Meek and Hayden. Holotype. Fox Hills (Cret.). Deer Creek, North Platte, Wyoming.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1861, p. 445.— Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 397, text figs. 51, 52.

= Baculites ovatus baculus.

376. Baculites compressus Say. Plesiotypes.

to Fort Pierre (Cret.). Cheyenne River and White River, 378. South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 400, pl. 20, figs. 3a-c.

22935. Baculites gracilis Shumard? Plesiotypes.

Colorado (Cret.). Near Paria and Upper Kanab, Utah, and Turkey Creek, Huerfano Park, Colorado.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 166, pl. 36, figs. 1-3.

See Baculites ovatus, 8631.

South Dakota.

380. Baculites grandis Hall and Meek. Plesiotypes. Fort Pierre (Cret). Cheyenne River, near Black Hills,

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 398, pl. 33, figs. 1a-c.

1363. Baculites occidentalis Meek. Cotypes.

Nanaimo (Cret.). Komooks, eastern shore of Vancouver Island.

Meek, Proc. Acad. Nat. Sci. Phila., for 1861, p. 316; Bull. U. S. Geol. and Geogr. Surv. Terrs., II, No. 4, 1876, p. 366, pl. 4, figs. 1, 1a, 1b.

See Baculites ovatus, 1363.

374. Baculites ovatus Say. Plesiotypes.

463. Fort Pierre (Cret.). Great Bend of Missouri below Fort Pierre, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 394, pl. 20, figs. 1a, 1b, 2a-c.

1363. Baculites ovatus Say? Plesiotypes.

Nanaimo (Cret.). Nanaimo, Vancouver Island.

Meek, Trans. Albany Inst., IV, 1857, p. 48.

= Baculites occidentalis.

8631. Baculites ovatus Say. Plesiotypes.

Colorado (Cret.). Southeast of Paria, Utah.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 199, pl. 19, figs. 4b, c.

= Baculites gracilis?

8630. Baculites ovatus Say. Plesiotypes.

Montana (Cret.). Gallinas Creek, New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 200, pl. 19, figs. 4a, 5a-c.

41789. Bairdia cestriensis Ulrich. Cotypes.

Chester (Miss.). Grayson Springs Station, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 210, pl. 17, figs. 6a-c, 7a, b.

41788. Bairdia leguminoides Ulrich. Holotype. Hamilton (Dev.). Eighteen Mile Creek, New York.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 197, pl. 17, figs. 5a-c.

3959. Bakevellia parva Meek and Hayden. Holotype. Permian. Near mouth of Smoky Hill River, Kansas.

Meek and Hayden, Trans. Albany Inst., IV, 1858, p. 78; Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 57, pl. 2, figs. 12a, 12b.

8476. Bakevellia parva Meek and Hayden. Plesiotypes.
Upper Carboniferous. Bear Spring, Camp Wingate, New
Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 153, pl. 11, figs. 7a, 7b.

38117. Balaninus femoratus Scudder.

Cotypes.

Florissant (Oligocene). Florissant, Colorado.

Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 143, pl. 12, fig. 6.

39920. Balanocrinites sculptus Troost.

Chirotypes.

Silurian. Decatur County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 60.

158368. Balanophyllia augustinensis Vaughan. Paratypes. Lower Claibornian. San Augustine, Texas.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 174.

158367. Balanophyllia anularis Vaughan. Holotype.
Bell's Landing (Eocene). Lower Peach Tree Landing,
Alabama.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 174, pl. 20, figs. 3-5.

158378. Balanophyllia caulifera (Conrad). Plesiotypes.

Vicksburgian (Oligocene). Vicksburg, Mississippi, and Rosefield, Louisiana.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 176, pl. 20, figs. 16, 16a, 18.

158382. Balanophyllia caulifera multigranosa Vaughan.

Cotypes.

Red Bluff (Oligocene). Red Bluff, Mississippi.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 177, pl. 20, figs. 19, 20.

158328 Balanophyllia desmophyllum Milne-Edwards and Haime. to Plesiotypes.

158331. Gregg's and Bell's Landings (Eocene). Gregg's and Bell's Landings, Alabama.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 164, pl. 18, figs. 11-13a.

158347. Balanophyllia desmophyllum microcostata Vaughan.

158348. Co Nanafalia (Eocene). Nanafalia Bluff, Alabama.

Nanaralia (Eocene). Nanaralia Biun, Alabama.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 166, pl. 19, figs. 1-3c.

158369. Balanophyllia elongata Vaughan. Cotypes. Red Bluff (Oligocene). Red Bluff, Mississippi.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 175, pl. 20, figs. 11-14.

158389. Balanophyllia haleana (Milne-Edwards and Haime).

158390. Plesiotypes.

Woods Bluff (Eocene). Clarke County, Alabama.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 178, pl. 20, figs. 22, 23,

158362. Balanophyllia inauris Vaughan. Cotype.
Shark River=? Claibornian (Eocene). Near Squankum,
New Jersey.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 171, pl. 19, fig. 12.

158364. Balanophyllia ponderosa Vaughan. Cotype.
Midway (Eocene). Prairie Creek, Wilcox County, Alabama.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 173, pl. 20, figs. 1, 2.

13316. Balanus estrellanus Conrad.

Holotype.

13342. Miocene. Estrella, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 195, pl. 8, fig. 1.

116004. **Barbatia** (Cucullaria) aldrichi Dall. Holotype. Claibornian (Eocene). Claiborne, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 630, pl. 32, fig. 19.

107718. Barbatia (Calloarca) arcula (Heilprin). Plesiotype.
Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 624, pl. 33, fig. 4.

8071. Barbatia barbulata White.

Cotypes.

Fox Hills (Cret.). Cimarron, New Mexico.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883), Pt. I, p. 19, pl. 11, fig. 5a.

8067. Barbatia coalvillensis White.

Cotypes.

Colorado (Cret.). Coalville, Utah.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1877 (1879), p. 286, pl. 6, figs. 2a, 2b.

=Barbatia micronema.

107719. Barbatia (Calloarca) irregularis Dall. Holotype.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 623, pl. 33, fig. 5.

111618. Barbatia marylandica (Conrad). Plesiotype.

Miocene. Shiloh, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 48, pl. 7, figs. 2, 3.

7846. Barbatia micronema (Meek). Holotype and plesiotypes.
22870. Colorado (Cret.). Bear River City, Wyoming; Coalville,
22871. Utah, and Denton County, Texas.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 89, pl. 21, figs. 1-4.

See Barbatia coalvillensis and Trapezium micronema.

135761. Barbatia (Fossularca?) ovalina Dall. Holotype. Oligocene. Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 630, pl. 32, fig. 18.

7895. Barbatia (Polynema?) parallela (Meek). Holotype. Mentor (Cret.). Twelve miles west of Salina, Kansas.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 80, pl. 2, fig. 10.

See Arca? parallela.

135831. Barbatia (Calloarca) phalacra Dall. Holotype. Oligocene. Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 626, pl. 33, fig. 3.

148966. Barbatia (Cucullaria) tæniata Dall. Cotypes.
Pliocene. Shell Creek, Desoto County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p.
631, pl. 25, figs. 1, 1a.

153716. Barbatia (Granoarca) virginiæ Wagner. Plesiotypes.
Miocene. Simmons Bluff, South Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 627, pl. 32, fig. 23.

8048. Baroda subelliptica White. Cotypes. Fox Hills (Cret.). Mouth of the St. Vrains, Northern Colorado.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terrs., 1877 (1879), p. 294, pl. 10, figs. 4a-d.

1939. Baroda wyomingensis (Meek). Holotype.

Fox Hills (Cret.). Mouth of Deer Creek, on North
Platte, Wyoming.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terrs., 1877 (1879), p. 293, pl. 10, figs. 3a, 3b.

See Tapes wyomingensis.

24650. Barrandia? mccoyi Walcott. Cotype.
Upper Pogonip. (Ord.). Ridge east of Hamburg Ridge,
Eureka district, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 96, pl. 12, fig. 5.

30243. Barroisiceras hyatti Shattuck. Holotype. Buda (Low. Cret.). Shoal Creek, Austin; Texas.

Shattuck, Bull. No. 205, U. S. Geol. Surv., 1903, p. 36, pl. 25, figs. 3, 4.

30242. Barroisiceras texanum Shattuck. Holotype.
Buda (Low. Cret.). Little Bear Creek, Hays County,
Texas.

Shattuck, Bull. No. 205, U. S. Geol. Surv., 1903, p. 35, pl. 25, figs. 1, 2.

41821. Barychilina pulchella Ulrich.

Holotype.

Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 199, pl. 13, figs. 4a-c.

41819. Barychilina punctostriata Ulrich. Cotypes. Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 199, pl. 13, figs. 1a-e, 2a-c.

41820. Barychilina punctostriata curta Ulrich. Holotype. Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 199, pl. 13, figs. 3a-c.

15409. Bathynotus holopyga (Hall). Plesiotype. Lower Cambrian. Parker's Quarry, Georgia, Vermont.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 191, pl. 31, figs. 1, 1a; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 646, pl. 95, figs. 1, 1a.

11595. Bathyurellus (Asaphiscus) bradleyi Meek. Cotypes.
Middle Cambrian. Near Malade City, Northern Utah.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 (1873), p. 484.

= Asaphiscus bradleyi.

15457. Bathyuriscus howelli Walcott. Cotype.
Middle Cambrian. Chisholm Mine, Ely Mountains, near
Pioche, Nevada.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 216, pl. 30, fig. 2.

15455. Bathyuriscus productus (Hall and Whitfield). Cotypes and 15456. Plesiotype.

Middle Cambrian. Below Argenta, Big Cottonwood Canyon, City Creek, Wahsatch Mountains, and East Canyon, Oquirrh Mountains, Utah.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, pl. 217, pl. 30, fig. 1-1h.

=Ogygia producta (partim).

24654. Bathyurus? congeneris Walcott. Cotype.
Upper Pogonip (Ord.). Ridge southwest of Wood Cove,
Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 92, pl. 12, fig. 8 (?8a).

7863. Bathyurus? (Bathyuriscus) haydeni Meek. Holotype.
Middle Cambrian. Above Gallatin City, east side of Gallatin River, Montana.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 (1873), p. 482.

= Bathyuriscus haydeni.

24655. Bathyurus pogonipensis Hall and Whitfield. Holotype.

Lower Pogonip (Ord.). Pogonip Mountain, Eureka District, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 243, pl. 1, figs. 33, 34.

43052. Bathyurus schucherti Clarke. Cotype. Stones River (Ord.). Minneapolis, Minnesota.

Clarke, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 724, fig. 42.

7865. Bathyurus serratus Meek. Cotypes.

Middle Cambrian. Above Gallatin City, east side Gallatin River, Montana.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terrs., 1872 (1873), p. 480.

24653. Bathyurus ? simillimus Walcott. Holotype.
Upper Pogonip (Ord.). White Mountain, Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 93, pl. 12, fig. 11.

41932. Bathyurus spiniger (Hall). Plesiotype.
41933. Stones River (Ord.). High Bridge, Kentucky; Dunleith,
Illinois.

Clarke, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 723, figs. 38, 39.

24654. Bathyurus? tuberculatus Walcott. Cotype.
Upper Pogonip (Ord.). Ridge southwest of Wood Cove,
Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 91, pl. 12, fig. 9.

20097. Batissa dubia White. Cotypes.
Puget (Cret.?). Newcastle and Wilkeson, Washington.
White, Bull. No. 51, U. S. Geol. Surv. 1889, p. 61, pl. 11, figs. 1, 2.

20108. Batissa newberryi White. Cotypes.
Puget (Cret.?). Carbonado, Wilkeson, and Newcastle,
Washington.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 60, pl. 9, figs. 1-3.

43511. Batostoma? decipiens Ulrich. Holotype and figured sections.

Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 298, pl. 27, figs. 16-19.

43505. Batostoma fertile Ulrich. Cotypes and figured sections. Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 290, pl. 25, figs. 1-11.

43506. Batostoma fertile circulare Ulrich. Holotype and figured sections.

Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 291, pl. 25, figs. 5, 6, 8, 9.

43509. Batostoma humile Ulrich. Cotypes and figured sections. Trenton (Ord.). Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 294, pl. 25, figs. 29-36.

44061. Batostoma imperfectum Ulrich. Figured sections of cotypes. Richmond (Ord.). Wilmington, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 460, pl. 35, figs. 3a-3d.

= Hemiphragma imperfectum.

43508. Batostoma magnoporum Ulrich. Cotypes and figured sections.

Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 291, pl. 25, figs. 12-15.

43250. Batostoma manitobense Ulrich. Figured section of cotypes. Richmond (Ord.). Stony Mountain, Manitoba.

Ulrich, Geol. Surv. Canada, Contr. Micro-Pal. Cambro-Sil., Pt. II, 1889, p. 33, pl. 9, figs. 3-3c.

43507. Batostoma minnesotense Ulrich. Cotypes and figured sections.

Black River (Ord.). St. Paul and Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 297, pl. 26, figs. 38-40; pl. 27, figs. 9-15.

43512. Batostoma montuosum Ulrich. Holotype.

Black River (Ord.). Near Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 293, pl. 26, figs. 26-28.

43820. Batostoma variabile Ulrich. Cotypes and figured sections. 44062. Richmond (Ord.). Osgood, Indiana; Clarksville, Ohio.

Ulrich, Geol. Surv. Ill., VIII, 1899, p. 469, pl. 35, figs. 4b-4e, 5; pl. 36, fig. 1.

43510. Batostoma varium Ulrich. Cotypes and figured sections.
Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 292, pl. 25, figs. 16-25.

43815. Batostoma winchelli (Ulrich). Cotypes and figured sections. Black River (Ord.). St. Paul and Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 295, pl. 26, figs 33-37; pl. 27, figs. 1-6.

See Amplexopora winchelli.

43741. Batostomella abrupta Ulrich. Cotype and figured sections. Chester (Miss.). Sloans Valley, Pulaski County, Kentucky. Ulrich, Geol. Surv. Ill., VIII, 1890, p. 435, pl. 75, figs. 2a-2e.

43408. Batostomella gracilis (Nicholson). Figured sections of plesiotype.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 434, pl. 35, fig. 2.

=Bythopora gracilis.

43742. Batostomella interstincta Ulrich. Figured sections of cotype. St. Louis (Miss.). Pella, Iowa.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 434, pl. 75, figs. 4d, 4e.

43743. Batostomella nitidula Ulrich. Figured section of cotype. Chester (Miss.). Chester, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 436, pl. 75, fig. 3b.

43406. Batostomella obliqua Ulrich. Cotypes and figured sections. Traverse (Dev.). Alpena, Michigan.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 433, pl. 46, figs. 2-2c.

=Eridotrypa obliqua.

43744. Batostomella simulatrix Ulrich. Cotypes and figured sections.

Richmond (Ord.). Clarksville, Ohio.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 432, pl. 35, figs. 1, 1a, 1b, 1d-1g.

=Eridotrypa simulatrix.

43407. Batostomella spinulosa Ulrich. Cotypes and figured sections. Chester (Miss.). Sloans Valley, Pulaski County, Kentucky.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 434, pl. 75, figs. 1-1f.

8079. Beaumontia? solitaria White. Cotypes. Fox Hills (Cret.). Six miles south of Fort Collins, Colorado.

White, Bull. U. S. Geol. and Geogr. Surv. Terr., Vol. V, 1879, p. 221; Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878, (1883), Pt. I, p. 8, pl. 12, figs. 13a-13c.

[Based on fragments of a rudistid shell. T. W. Stanton.]

- 41816. Beecherella cristata Ulrich. Holotype.
  New Scotland (Dev.). Albany County, New York.
  Ulrich, Amer. Geol., VIII, 1891, p. 202, pl. 2, figs. 16-19.
- 41817. Beecherella subtumida Ulrich. Holotype. New Scotland (Dev.). Albany County, New York.

  Ulrich, Amer. Geol., VIII, 1891, p. 200, pl. 2, figs 5-7.
- 41818. Beecherella subtumida intermedia Ulrich. Holotype. New Scotland (Dev.). Albany County, New York.

  Ulrich, Amer. Geol., VIII, 1891, p..201, pl. 2, fig. 15.
- 162551. Bela sanctæ-monicæ Arnold. Holotype.
  Pleistocene. Port Los Angeles, near Santa Monica, California.

Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 210, pl. 8, fig. 14.

- Fox Hills (Cret.). Moreau River, South Dakota.

  Mock and Handen Proc. Acad. Not. Sci. Philo. VIII. 1856.
  - Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 70.—Meek, Rept. U. S. Geological Surv. Terr., IX, 1876, p. 504, pl. 33, figs. 2c-e.
- 195. Belemnites densus Meek and Hayden. Cotypes.

  Jurassic. Southwest base of Black Hills, South Dakota.

  Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1858, p. 58;

  Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172,

  XIV, 1864, p. 126, pl. 4, fig. 10c.; pl. 5, figs. 1b-d, f-i.
- 12293. Belemnites densus Meek and Hayden. Plesiotypes.

  Jurassic. Beaver Creek, and east of the Belle Fourche
  River, Black Hills, South Dakota.
  - Whitfield, Rept. Geol. and Resources Black Hills, Dakota, 1880, p. 381, pl. 6, figs. 15-19.
- 23096. Belemnites impressus Gabb. Plesiotypes. 23097. Knoxville (Lower Cret.). Tehama County, and near Ono, California.
  - Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 84, pl. 20, figs. 1-5.
- 12361. Belemnites macritatis White. Cotypes. Lower Cretaceous?. Fossil Point, Port Möller, Alaska. White, Bull. No. 4, U. S. Geol. Surv., 1884, p. 14, pl. 6, figs. 13,14.
- 12515. Belemnites nevadensis Meek. Cotypes.
  12517. Jurassic. Cottonwood Canyon and American District,
  West Humboldt Range, Nevada.
  - Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 138, pl. 12, figs. 7, a, b; 8, a, b.
- 30207 Belemnites pacificus Gabb. Plesiotypes to Jurassic. Mariposa County, and American Canyon, 1 30209. Greenwood, California.

Hyatt, Bull. Geol. Soc. Amer., V, 1894, p. 427.

23098. Belemnites tehamaensis Stanton.

Holotype.

Knoxville (Lower Cret.). South Fork of Elder Creek, Tehama County, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 84, pl. 19, figs. 1-3.

46577. Belemnospongia fascicularis Ulrich. Cotype. Burlington (Miss.). Burlington, Iowa.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 248, pl. 3, fig. 2b.

38860. **Belinurus lacoe**i Packard. Holotype. Upper Coal Measures. Mazon Creek, Grundy County, Illinois.

Packard, Amer. Nat., XIX, 1885, p. 292; Mem. Nat. Acad. Sci., III, 1886, p. 149, pl. 5, fig. 5.

[Probably the same as Prestwichia danæ. Probably a sexual difference.]

8564. Bellerophon allegoricus White. Cotypes.
Middle Ordovician. Fish Spring, House Range, Utah.

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 8vo, 1874, p. 10; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1877, p. 55, pl. 3, figs. 6a—6c.

45697. Bellerophon bilineatus Ulrich.

Holotype.

Trenton (Ord.). Near Danville, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 917, pl. 64, figs. 19–21.

9209. Bellerophon bowmani White.

Holotype.

Hamilton (Dev.). Andalusia, Illinois.

White, Proc. Acad. Nat. Sci. Phila., 1876, p. 32.

45698. Bellerophon capax Ulrich.

Cotypes.

45699. Lorraine (Ord.). Covington, Kentucky; Cincinnati, Ohio.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897. p. 921. pl. 63, figs. 50, 51; pl. 64, figs. 40-43.

6506. Bellerophon carbonarius Cox. Plesiotypes.

6548. Upper Carboniferous. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Neb. (Hayden), 1872, p. 224, pl. 4, fig. 16; pl. 11, figs. 11a-c.

=Euphemus carbonarius.

45700. Bellerophon clausus Ulrich.

Cotypes.

45701. Trenton (Ord.). Frankfort, Kentucky; Middle Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 916, pl. 64, figs. 7-10.

13955. Bellerophon combsi Walcott. Cotype.
Middle Devonian. Combs Peak, Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 193, pl. 17, figs. 9-9b.

24346. Bellerophon coutinhoanus Hartt and Rathbun. Cotype.
Middle Devonian. Ereré, Para, Brazil.

Hartt and Rathbun, Ann. Lyceum Nat. Hist. N. Y., XI, 1875, p. 117.

=Bucaniella coutinhoana.

8489. Bellerophon crassus Meek and Worthen. Plesiotype.
Upper Carboniferous. Camp Cottonwood, near Spring
Mountain, Nevada.

White, U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1877, p. 157, pl. 12, fig. 1a.

14985. Bellerophon incisus Clarke. Holotype. Naples (Dev.). Parrish Gully, Naples, New York.

Clarke, Bull. No. 16, U.S. Geol. Surv., 1885, p. 53.

8924. Bellerophon inspeciosus White. Cotypes. Upper Carboniferous. Near Taos, New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., III, Suppl., 1881, p. 30, pl. 4, figs. 1a-1d.

= Bellerophon (Euphemus) inspeciosus.

45719. Bellerophon lindsleyi Safford.

Holotype.

Trenton (Ord.). Dekalb County, Tennessee.

Safford, Geol. Tenn., 1869, pl. G, figs. 3a, b, d, e.

= Bucania lindsleyi.

14420. Bellerophon majusculus Walcott. Cotypes.
Lower Carboniferous. Near Pinto Peak, Eureka District,
Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 256, pl. 23, figs. 1, 1a; pl. 24, fig. 6.

6521. Bellerophon marcouianus Geinitz. Plesiotypes.

6986. Upper Carboniferous. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Neb. (Hayden), 1872, p. 226, pl. 4, fig. 17; pl. 11, fig. 13a.

=Bucanopsis marcouiana.

3622. Bellerophon micromphalus Morris. Plesiotypes. Carboniferous. District of Illawarra, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 708, Atlas, pl. 10, figs. 6a, 6b.

45702. Bellerophon mohri Miller. Plesiotypes.

Richmond (Ord.). Richmond, Indiana.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final <sup>1</sup> III, Pt. II, 1897, p. 920, pl. 64, figs. 44, 45.

6512. Bellerophon montfortianus Norwood and Pratten.

Plesiotypes.

Upper Carboniferous. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Neb. (Hayden), 1872, p. 225, pl. 11, fig. 15.

= Patellostium montfortianus.

21702. Bellerophon montfortianus Norwood and Pratten.

Plesiotype.

Permian. Godwin Creek, Baylor County, Texas.

White, Bull. No. 77, U. S. Geol. Surv., 1891, p. 26, pl. 3, figs-15, 16.

=Patellostium montfortianus.

24345. Bellerophon morganianus Hartt and Rathbun. Cotypes.
Middle Devonian Ereré, Para, Brazil.

Hartt and Rathbun, Ann. Lyceum Nat. Hist. N. Y., XI, 1875, p. 117.

24345. **Bellerophon morganianus** Hartt and Rathbun. Plesiotypes. Middle Devonian. Ereré, Brazil.

Clarke, Archivos do Mus. Rio de Janeiro, X, 1899, p. 34, pl. 3, figs. 1-3.

14013. Bellerophon neleus Hall and Whitfield. Cotypes.
Upper Devonian. Treasure Hill, White Pine District,
Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 250, pl. 3, figs. 18-20.

6518. Bellerophon percarinatus Conrad. Plesiotype. Upper Carboniferous. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Neb. (Hayden), 1872, p. 227, pl. 11, fig. 14.

13954. Bellerophon perplexa Walcott. Cotypes.
Middle Devonian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 193, pl. 17, figs. 6-6b.

45703. Bellerophon platystoma Meek and Worthen. Plesiotypes. 45704. Trenton (Ord.). Cannon Falls, Minnesota; Dixon, Illinois.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 918, pl. 64, figs. 22-25.

45705. Bellerophon recurvus Ulrich. Cotypes.

Lorraine (Ord.) Cincinnati, Ohio.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 920, pl. 64, figs. 11-13.

45706. Bellerophon similis Ulrich and Scofield. Cotypes.
45707. Trenton (Ord.). Wykoff and one and a half miles south of Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 919, pl. 64, figs. 31-39.

24318. Bellerophon steltzneri Clarke. Holotype.
Middle Devonian. Rio Curua, Brazil.

Clarke, Archivos do Mus. Rio de Janeiro, X, 1899, p. 34, pl. 3, figs. 5, 6.

3623. Bellerophon strictus Dana. Holotype. Carboniferous. Wollongong Point, Illawarra, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 707, Atlas pl. 10, figs. 5-5b.

45708. Bellerophon subangularis Ulrich. Holotype. Richmond (Ord.). Richmond, Indiana.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 920, pl. 64, figs. 14-16.

45709. Bellerophon subglobulus Ulrich. Holotype.
Black River (Ord.). Mercer County, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt.

II, 1897, p. 917, pl. 64, figs. 17, 18.

8234. **Bellerophon subpapillosus** White. Cotypes. Upper Carboniferous. Wild Band Pockets, Arizona.

White, Bull. No. 5, U. S. Geol. Surv., Terr., 1879, p. 218; Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878, Pt. I (1883), p. 138, pl. 34, fig. 3a.

=Euphemus subpapillosus.

14421. Bellerophon textilis Hall? Plesiotype.

Lower Carboniferous Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 257, pl. 18, fig. 18.

45710. **Bellerophon troosti** (D'Orbigny) Safford. Plesiotypes. 45711. Trenton (Ord.). Nashville, Tennessee; near Danville, Kentucky.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 915, pl. 64, figs. 1-5.

45712. Bellerophon troosti burginensis Ulrich. Holotype.
Trenton (Ord.). Three miles north of Burgin, Kentucky.
Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt.
II, 1897, p. 916, pl. 64, fig. 6.

3624. Bellerophon undulatus Dana. Holotype.
Carboniferous. Harper's Hill on the Hunter, New South
Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 707, Atlas pl. 10, figs. 4-4b.

33789. Beltina danai Walcott. Coty-33790. Greyson (Algonkian). Near Glenwood and Nei Montana.

Walcott, Bull. No. 10, Geol. Soc. Amer., 1899, p. 239, pl. 25, 1-18; pl. 26, figs. 1-8; pl. 27, figs. 2-6.

45713. Bembexia sulcomarginata (Conrad). Plesiotype.

Hamilton (Dev.). Delphi Falls, New York.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1001, fig. 6.

107077. Benthonella turbinata Guppy. Holotype. Upper Oligocene. Pointapier, Trinidad, West Indies. Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 321, pl. 27, fig. 10.

43269. Berenicea minnesotensis Ulrich. Cotype. Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 120, pl. 1, figs. 25, 29; pl. 2, fig. 1.

43268. Berenicea primitiva Ulrich. Holotype. Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 157, pl. 6, fig. 4.

43267. Berenicea vesiculosa Ulrich. Holotype.

Utica (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 158, pl. 6, fig. 5.

41666. Beyrichia initialis Ulrich. Holotype.
Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 658, pl. 43, figs. 82, 83.

41381. Beyrichia (? Drepanella) kalmodini (Jones). Plesiotypes. Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 190, pl. 14, figs. 1a-c.

41380. Beyrichia lyoni Ulrich.

Cotypes.

Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 190, pl. 14, figs. 2a-c, 3.

14006. Beyrichia (Primitia) occidentalis Walcott. Cotype.
Middle Devonian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 204, pl. 17, figs. 4, 4a.

41434. Beyrichia (? Primitia) parallela (Ulrich). Plesiotype. Richmond (Ord.). Richmond, Indiana.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 125, pl. 10, figs. 15a-d.

41524. Beyrichia persulcata Ulrich. Holotype. Utica (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 12, pl. 7, fig. 6.

=Bollia persulcata.

41692. Beyrichia radiata cestriensis Ulrich. Holotype. Chester (Miss.). Near Grayson Springs, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII. 1890, p. 204, pl. 14, figs. 4a, 4b.

41696. Beyrichia simulatrix Ulrich. Holotype. Chester (Miss.). Near Grayson Springs, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII. 1890, p. 205, pl. 18, figs. 7a, 7b.

41678. Beyrichia tricollina Ulrich. Holotype. Hamilton (Dev.). Eighteen Mile Creek, New York.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 189, pl. 12, fig. 6.

14889. Bicia gemma (Billings). Plesiotype.

15349. Lower Cambrian. Troy, New York; Bic Harbor, Quebec, Canada.

Walcott, Proc. U. S. Nat. Mus., XXIII, 1901, p. 678. See Obolella gemma.

35260. Bicia whiteavesi Walcott.

Cotypes.

Lower Cambrian. Troy, New York.

Walcott, Proc. U. S. Nat. Mus., XXIII, 1901, p. 680.

35213. Billingsella coloradoensis (Shumard). Plesiotype.
Gallatin (Up. Cambrian). Gallatin Range, Yellowstone
National Park.

Walcott, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 450, pl. 61, figs. 1, 1a-d.

113332. Bittium annettæ Dall. Holotype.

Miocene. Cape Fear River, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 273, pl. 20, fig. 3.

113343. Bittium (Styliferina) boiplex Dall. Holotype. Oligocene. Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 275, pl. 21, fig. 14.

113344. Bittium (Styliferina) cerithidioides Dall. Holotype.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 276, pl. 16, fig. 8.

Oligocene. Chipola River, Calhoun County, Flo

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II 272, pl. 21, fig. 15.

113329. Bittium chipolanum burnsii Dall. Holotype. Oligocene. Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 272, pl. 21, fig. 18.

Oligocene. Chipola River, Calhoun County, Florida.

Holotype.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 273, pl. 21, fig. 16.

113330. Bittium permutabile Dall. Holotype. Oligocene. Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 272, pl. 21, fig. 17.

113333. Bittium podagrinum Dall. Holotype.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 274, pl. 21, fig. 12.

Oligocene. Vendryes, Jamaica, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 318, pl. 28, fig. 2.

112522. Bittium (Styliferina?) priscum Dall. Holotype.
Oligocene. Hillsboro Bay, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, pl. 11, fig. 6; Pt. II, 1892, p. 275.

162547. Bittium williamsoni Arnold. Holotype. Pleistocene. San Pedro, California.

Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 295, pl. 6, fig. 11.

41329. Bollia granifera Ulrich. Holotype. St. Louis (Miss.). Elizabethtown, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 205, pl.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 205, pl. 12, figs. 12a, b.

Holotype.

Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 189, pl. 14, figs. 5a-c.

41524. Bollia persulcata (Ulrich). Plesiotypes. Utica (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1800, p. 116, figs. 3, 3a-d.

See Beyrichia persulcata.

41691. Bollia pumila Ulrich.

Richmond (Ord.). Near Weisburg, Indiana.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 117, pl.
12, figs. 1a, 1b.

41519. Bollia subæquata Ulrich. Cotypes.

41520. Trenton (Ord.). Fountain and St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 669, pl. 46, figs. 26-29.

41330. Bollia ungula Jones. Plesiotype. Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 188, pl. 14, figs. 6a, b.

135875. Bornia dodona Dall. Holotype. Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III. Pt. V, 1900, p. 1150, pl. 45, fig. 16.

135876. Bornia floridana Dall. Holotype. Oligocene. Oak Grove, Santa Rosa County, Florida.
 Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1150, pl. 45, fig. 2.

155763. Bornia lioica Dall. Holotype.
Pliocene. Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1151, pl. 25, fig. 6.

155764. Bornia mazyckii Dall. Holotype.
Pliocene. Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900,

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1152, pl. 25, fig. 8.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1149, pl. 49, fig. 9.

115094. Bornia rota Dall.

Miocene. Natural Well, Duplin County, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900,
p. 1151, pl. 45, fig. 11.

108492. Bornia scintillata Dall. Holotype.
Claibornian (Eocene). Claiborne, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900,
p. 1149, pl. 49, fig. 10.

147034. Borsonia ludoviciana Vaughan. Holotype. Jackson (Eocene). Montgomery, Louisiana.

Vaughan, Bull. No. 142, U. S. Geol: Surv., 1897, p. 34, pl. 2, figs. 6, 6a.

43221. Botryllopora socialis Nicholson. Plesiotype and f se Hamilton (Dev.). Eighteen Mile Creek, New Yorl Ulrich, Geol. Surv. Ill., VIII, 1890, p. 490, pl. 43, figs. 9-94 157837. Brachysphingus liratus (Gabb). Plesiotypes.

Lower Tejon (Eocene). One mile southeast of Lower

Lake, Lake County, California.

Stanton, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. I, 1897, p. 1048, pl. 66, figs. 5, 6.

115406. Brissopsis antillarum Cotteau. Cotypes.
Miocene. Anguilla, West Indies.

Cotteau, Kongl. Svenska Vet. Akad. Hand., XIII, 6, 1874, p. 37, pl. 6, figs. 19-25.

115396. Brissus exiguus Cotteau.

Holotype.

Miocene. Anguilla, West Indies

Cotteau, Kongl. Svenska Vet. Akad. Hand., XIII, 6, 1874, p. 35.

43015. Bronteus tullius Hall and Clarke. Plastotype. Tully (Dev.). Near Otisco, Onondaga County, New York. Hall and Clarke, Nat. Hist. New York, Pal. VII, 1888, p. 12, pl. 8a, figs. 34, 35.

26106 Brooksella alternata Walcott. Cotypes. to Middle Cambrian. Coosa Valley, Alabama.

26147. Walcott, Proc. U. S. Nat. Mus., XVIII, 1896, p. 612, pl. 31, figs. 1-5; Mon. XXX, U. S. Geol. Surv., 1898, p. 23, pls. 1, 2, 3, figs. 1-10; pl. 4.

26148 Brooksella confusa Walcott. Cotypesto Middle Cambrian. Coosa Valley, Alabama.

26150. Walcott, Proc. U. S. Nat. Mus., XVIII, 1896, p. 612, pl. 31, figs. 7-7b; Mon. XXX, U. S. Geol. Surv., 1898, p. 30, pl. 3, figs. 11, 12, 12a, 13, 13a.

17301. Bucania bidorsata Hall. Plesiotype. Upper Pogonip (Ord.). Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 271, pl. 1, figs. 13-13c.

=Tetranota bidorsata.

45714. Bucania crassa Ulrich. Holotype. Richmond (Ord.). Near Richmond, Indiana.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 893, pl. 67, figs. 46-48.

45715. **Bucania elliptica** Ulrich and Scofield. Holotype. Trenton (Ord.). Three miles south of Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 888, pl. 66, figs. 11, 12.

46049. **Bucania emmonsi** Ulrich and Scofield. Cotypes. 46050. Stones River (Ord.). Murfreesboro, Tennessee. Black River (Ord.). Near Fountain, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 887, pl. 66, figs. 1-3.

45716. Bucania frankfortensis Ulrich. Holotype.

Trenton (Ord.). Frankfort, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 891, pl. 66, figs. 30-33.

45717. Bucania halli Ulrich and Scofield. Cotypes.

45718. Stones River (Ord.). Cannon Falls, Minnesota. Black River (Ord.). Mercer County, Kentucky.

Black River (Ord.). Mercer County, Kentucky.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 886, pl. 66, figs. 4-8.

45719. Bucania lindsleyi (Safford). Holotype.

Trenton (Ord.). Dekalb County, Tennessee.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, pt. II, 1897, p. 889, pl. 66, figs. 24, 25.

See Bellerophon lindsleyi.

45720. Bucania micronema Ulrich. Holotype.

Trenton (Ord.). Danville, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 892, pl. 66, figs. 26–29.

45721. Bucania minnesotensis Ulrich and Scofield. Holotype. Stones River (Ord.). Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 887, pl. 66, figs. 9, 10.

45722. Bucania nana Ulrich.

Cotypes.

Trenton (Ord.). One and one-half miles south of Burgin, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 895, pl. 66, figs. 41-44.

45723. Bucania nana subpatula Ulrich. Holotype.

Trenton (Ord.). One and one-half miles south of Burgin,

Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 896, pl. 66, figs. 45, 46.

45724. Bucania nashvillensis Ulrich. Cotypes.

45725. Trenton (Ord.). Nashville and Dekalb County, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 890, pl. 66, figs. 36-40.

45726. Bucania peracuta Ulrich.

Holotype.

Trenton (Ord.). Dekalb County, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 896, pl. 66, figs. 34, 35.

45727. Bucania punctifrons Emmons.

Plesiotypes.

Trenton (Ord.). Nashville, Tennessee.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 894, pl. 67, figs. 41-44. 45728. Bucania rugatina Ulrich.

Holotype.

Trenton (Ord.). One and one-half miles south of Burgin, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 890, pl. 66, figs. 13-15.

45729. Bucania simulatrix Ulrich.

Holotype.

Richmond (Ord.). Richmond, Indiana.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 892, pl. 63, figs. 48, 49; pl. 67, fig. 45.

45730. Bucania singularis Ulrich.

Holotype.

Trenton (Ord.). Nashville, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 894, pl. 66, fig. 47.

45731. Bucania subangulata Ulrich.

Cotypes.

Trenton (Ord.). One and one-half miles south of Burgin, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept. III, Pt. II, 1897, p. 891, pl. 66, figs. 20-23.

45732. Bucania sublata Ulrich and Scofield.

Cotypes.

Stones River (Ord.). Minneapolis, Minnesota. 45733.

Trenton (Ord.). Near Burgin, Kentucky.

Ulrich and Scofield, Geol, and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 888, pl. 66, figs. 16-19.

24344. Bucaniella coutinhoana (Hartt and Rathbun). Plesiotype. Middle Devonian. Ereré, Brazil.

> Clarke, Archivos do Mus. Rio de Janeiro, X, 1899, p. 38, pl. 3, figs. 19, 20.

See Bellerophon coutinhoanus.

45734. Bucanopsis carinifera Ulrich.

Cotypes.

Trenton (Ord.). Near Danville, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 925, pl. 62, figs. 56-61.

45735. Bucanospira expansa Ulrich.

Cotypes.

Niagara (Sil.). Wayne County, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1044, figs. 9a-c.

o881. Buccinopsis parryi Conrad.

Holotype.

Cretaceous. Between Rio San Pedro and Rio Puercos, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, pt. 2, 1857, p. 158, pl. 13, figs. 5a, 5b.

202. Buccinum? nebrascensis Meek and Havden. Holotype. Fox Hills (Cret.). Moreau River. South Dakota.

> Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 67. adobuccinum nebrascense.

8628. Buchiceras swallovi (Shumard). Plesiotypes. 22938.

Colorado (Cret.). Glendale, Long Valley, Utah.

White, Rept. U. S. Geogr. Surv., W. 100th Merid., IV, Pt. I, 1876, p. 202, pl. 20, figs. 1a-c.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 168, pl. 37, fig. 1; pl. 38, figs. 1-3.

35366. Bulimorpha chrysalis Meek and Worthen. Plesiotypes. Rico (Upper Carb.). Scotch and Marguerite creeks, 35367. Rico Quadrangle, Colorado.

> Girty, Prof. Pap. 16, U. S. Geol. Surv., 1903, p. 466, pl. 10, ngs. 6-6b, 7, 7a.

111965. Bulimulus (? Anctus) americanus (Heilprin). Plesiotypes. Oligocene. Ballast Point, Tampa, Florida.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 7, pl. 1, figs. 9, 9a.

111971. Bulimus (? Anctus) americanus laxus Dall. Cotypes. Oligocene. Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 7.

119970. Bulimulus (? Anctus) americanus partulinus Dall.

Cotypes.

Oligocene. Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 7.

111060. Bulimulus (? Anctus) floridanus (Conrad). Plesiotype. Oligocene. Ballast Point, Tampa, Florida.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 5, pl. 1, fig. 11.

111962. Bulimulus (? Anctus) heilprinianus Dall. Cotypes. Oligocene. Ballast Point, Tampa, Florida.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 6, pl. 1, figs. 6b, 10.

111064. Bulimulus (? Anctus) stearnsii Dall. Holotype. Oligocene. Ballast Point, Tampa, Florida.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 7, pl. 1, fig. 12.

2115. Bulimus? teres Meek and Hayden. Holotype. Laramie (Cret.). Three miles below Fort Union, North Dakota.

> Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 117. =Columna teres.

2113. Bulimus? vermiculus Meek and Hayden. Holotype and paratypes.

Laramie (Cret.). Three miles below Fort Union, Nortl Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 118 =Columna vermicula.

12481. Bulinus atavus White.

Holotype.

Laramie (Cret.). Dog Creek, Montana.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883),
Pt. I, p. 86, pl. 24, figs. 5a-5b; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 450, pl. 25, figs. 6, 7; Bull. No. 34, U. S. Geol. Surv., 1886, p. 25, pl. 3, figs. 7, 8.

20070. Bulinus atavus White?

Plesiotypes.

Laramie (Cret.) and Eocene. Wales, Utah.

White, Bull. No. 34, U. S. Geol. Surv., 1886, p. 25, pl. 3, figs. 9, 10.

12469. Bulinus disjunctus White.

Cotypes.

Laramie (Cret.). Crow Creek, Northern Colorado.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terrs., 1878 (1883), pt. I, p. 86, pl. 24, figs. 6a, 6b; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 451, pl. 25, figs. 4, 5.

2120. Bulinus longiusculus (Meek and Hayden). Holotype and paratypes.

Laramie (Cret.). Three miles below Fort Union, North Dakota.

Meek, Rept. U. S. Geol. Surv. Terrs., IX, 1876, p. 541, pl. 43, figs. 16a, 16b.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 451, (pl. 25, fig. 8.)

See Physa longiuscula.

19181. Bulinus? rhomboideus (Meek and Hayden). Holotype.

Laramie (Cret.). Three miles below Fort Union, North
Dakota.

Meek, Rept. U. S. Geol. Surv. Terrs., IX, 1876, p. 542, pl. 43, fig. 17; White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 451, pl. 25, fig. 9.

See Physa rhomboidea.

2118. Bulinus subelongatus Meek and Hayden. Holotype. Laramie (Cret.). Bad Lands of Judith River, Montana.

Meek, Rept. U. S. Geol. Surv. Terrs., IX, 1876, p. 540, pl. 42, figs. 13a, 13b.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 450, pl. 25, figs. 10, 11.

See Physa subelongata.

280. Bulla minor Meek and Hayden.

Holotype.

Fox Hills (Cret. ). Moreau River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 69. = Haminea minor.

278. Bulla occidentalis Meek and Hayden.

Holotype and paratypes.

Fort Pierre or Fox Hills (Cret.). Yellowstone River, Miles City, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 69. 

⇒ Haminea occidentalis.

3607. Bulla petrosa Conrad.

Holotype.

Miocene. Astoria, Oregon.

Conrad, Wilkes U. S. Expl. Exped., X, 1849, p. 727, Atlas, pl. 19, fig. 8.

=Cylichna petrosa.

97486. Bulla striata attenuata Dall.

Holotype.

Pliocene. Shell Creek, De Soto County, Florida.

Dall. Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 219, pl. 13, fig. 10a.

279. Bulla subcylindrica Meek and Hayden.

Holotype.

Fort Pierre (Cret.). Near mouth of Milk River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 270.

=Haminea subcyclindrica.

115432. Bulla vendryesiana Guppy.

Holotype.

Oligocene. Jamaica, British West Indies.

Guppy, Geol. Mag., London, Dec. II, I, 1874, p. 407, pl. 16, fig. 6.

281. Bulla volvaria Meek and Hayden.

Holotype.

Fox Hills (Cret.). Moreau River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 69.

=Cylichna? volvaria.

113894. Bullina (Abderospira) chipolana Dall.

Cotypes.

Chipola (Oligocene). Chipola River, Florida.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 32.

= Micromelo (Abderospira) chipolana.

135143. Bullinella jacksonensis exta Harris.

Holotype.

Eocene. White Bluff, Arkansas River, Arkansas.

Harris, Ann. Rept. Geol. Surv. Ark., 1894, Pt. II, p. 158, pl. 6, fig. 3.

43273. Buskopora lunata Rominger.

Plesiotype.

Onondaga (Dev.). Falls of the Ohio.

Ulrich, Geol. Surv. Ill., VII, 1890, p. 489, pl. 48, figs. 7-7d.

=Buskopora dentata.

1863. Busycon? blakei Conrad.

Holotype.

Eocene. Canada de las Uvas, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, V, 1856, p. 322, pl. 2, fig. 13.

111625. Busycon scalarispira Conrad.

Plesiotype.

Miocene. Jericho, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol, Surv., 1894, p. 102, pl. 17, figs. 11, 12.

46095. Byssonychia acutirostris Ulrich. Holotype.
Lorraine (Ord.). Cincinnati, Ohio.
Ulrich, Geol. Surv. Ohio, VII, 1893, p. 634, pl. 45, figs. 8, 9; pl. 46, fig. 10.

46096. Byssonychia alveolata Ulrich. Holotype. Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 631, pl. 48, figs. 1-3.

46097. Byssonychia(?) byrnesi Ulrich. Cotypes.
Trenton (Ord.). Covington, Kentucky.
Ulrich, Geol. Surv. Ohio, VII, 1893, p. 635, pl. 47, figs. 4, 5.

46098. **Byssonychia cultrata** Ulrich. Cotypes. 46596. Richmond (Ord.). Waynesville, Ohio; Versailles, Indiana. Ulrich, Geol. Surv. Ohio, VII, 1893, p. 632, pl. 45, figs. 5-7.

46099. Byssonychia grandis Ulrich. Cotypes. 46100. Richmond (Ord.). Oxford and Clarksville, Ohio. Ulrich, Geol. Surv. Ohio, VII, 1893, p. 631, pl. 46, figs. 6-9.

46101. Byssonychia imbricata Ulrich. Holotype. Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 635, pl. 46, figs. 4, 5.

46102. Byssonychia intermedia (Meek and Worthen). Plesiotype. Trenton (Ord.). Near Wykoff, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 499, pl. 35, figs. 25, 26.

46103. Byssonychia obesa Ulrich. Holotype. Richmond (Ord.). Richmond, Indiana.
Ulrich, Geol. Surv. Ohio, VII, 1893, p. 630, pl. 45, figs. 10, 11, 12.

46104. Byssonychia præcursa Ulrich. Cotype.
Lorraine (Ord.). Lorraine, New York.
Ulrich, Geol. Surv. Ohio, VII, 1893, p. 633, pl. 45, fig. 1.

46105. Byssonychia radiata (Hall). Plesiotype. Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Geol. and Nat. Hist. Surv., Minn. Final Rept., III, Pt. II, 1894, p. 477, fig. 6.

46106. Byssonychia richmondensis Ulrich. Holotype. Richmond (Ord.). Richmond, Indiana.
Ulrich, Geol. Surv. Ohio, VII, 1893, p. 632, pl. 45, figs. 3, 4.

46107. Byssonychia suberecta Ulrich. Cotypes. Richmond (Ord.). Versailles, Indiana.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 634, pl. 45, figs. 13-15.

46108. Byssonychia vera Ulrich. Cotypes. Utica (Ord.). Cincinnati, Ohio.
Ulrich, Geol. Surv. Ohio, VII, 1893, p. 629, text figs. a, b, c.

7836. Bythinella gregaria Meek.

Cotypes.

Eocene. Pacific Springs, Wyoming.

Meek, Fourth Ann. Rept. U. S. Geol. Surv. Terrs., 1871, p. 317.— White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 48, pl. 19, figs. 6a, 6b; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 466, pl. 28, figs. 12, 13.

23120. Bythinella latentis White.

Cotypes.

Bear River (Cret.). Twenty miles north of Cokeville, Wyoming.

White, Bull. No. 128, U. S. Geol. Surv., 1895, p. 58, pl. 10, figs. 10, 11.

113564. Bythinella nickliniana attenuata (Haldeman).

Plesiotypes.

Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 338, pl. 21, fig. 19.

41794. Bythocypris (?) curta Ulrich.

Holotype.

Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 689, pl. 44, figs. 36-38.

41795. Bythocypris cylindrica (Hall).

Plesiotypes.

41796. Trenton (Ord.). Cannon Falls, Minnesota.

Utica (Ord.). Cincinnati, Ohio.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 687, pl. 44, figs. 29–35.

4.1822. Bythocypris devonica Ulrich.

Holotype.

Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 196, pl. 17, figs. 1a-c.

41793. Bythocypris granti Ulrich.

Cotypes.

Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept. III, Pt. II, 1894, p. 689, pl. 44, figs. 39-42.

43157. Bythocypris indianensis Ulrich.

Holotype.

Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 197, pl. 16, figs. 11a-c.

41799. Bythocypris parilis Ulrich.

Cotypes.

Eocene. Upper Marlboro, Maryland.

Ulrich, Md. Geol. Suvr., Eocene, 1901, p. 117, pl. 16, figs. 5-8.

41823. Bythocypris punctulata Ulrich.

Holotyr

Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 19 17, figs. 2a-c.

41707. Bythocypris punctulata niagarensis Ulrich. Holotype. Rochester (Sil.). Lockport, New York.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 196.

41728. Bythocypris? robusta Ulrich. Holotype. Stones River (Ord.). Dixon. Illinois.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 690, figs. 52a-d.

41798. Bythocypris subaequata Ulrich. Cotypes. Eocene. Upper Marlboro, Maryland.

Ulrich, Md. Geol. Surv., Eocene, 1901, p. 116, pl. 16, figs. 1-4.

43514. Bythopora alcicornis Ulrich. Cotypes.
Black River (Ord.). Near Cannon Falls, Minnesota.
Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I,

1893, p. 264, pl. 26, figs. 7-9.
43513. Bythopora herricki Ulrich. Cotypes and figured sections.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 263, pl. 26, figs. 1-6.

44064. Bythopora striata Ulrich. Cotypes. Richmond (Ord.). Middletown, Ohio.

Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. Surv. Canada, Contrib. Micro-Pal., Cambro-Sil., Pt. II, 1889, p. 36.

43220. Bythotrypa laxata Ulrich. Plesiotypes and figured sections.
Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 325, pl. 28, figs. 21-25.

Onondaga (Dev.). Falls of the Ohio.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 60.

Miocene. Alum Bluff, Appalachicola River, Florida.

Pall. Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p 446, pl. 23. fig. 26.

Cadulus floridanus burnsii Dall. Cotypes.
Oligocene. Alum Bluff, Calhoun County, Florida.

Dall. Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 446.

Cadulus parianus Guppy. Holotype. Upper Oligocene. Pointapier, Trinidad, West Indies. Guppy, Proc. U.S. Nat. Mus., XIX, 1896, p. 325, pl. 30, fig. 7.

Piocene. Caloosahatchie River, near Fort Thompson, Florida.

Dail. Trans. Wagner Free Inst. Sci. Phila. III, Pt. II, 1892, p. 300, pl. 22, fig. 85. 113401. Cæcum coronellum Dall. Cotypes.
113402. Miocene. Cape Fear River, North Carolina, and Caloosahatchie River, Florida

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 298 pl. 20, fig. 11a,

83590. Cæcum floridanum compactum Dall. Cotypes.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall. Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 298, pl. 20, fig. 9b.

112332. Cæcum tortile Dall.

Pliocene. Tillys Lake, Waccamaw River, South Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 301, pl. 13, fig. 9a.

112333. Cæcum (tortile var.?) ibex Dall. Cotypes.
Pliocene. Tillys Lake, Waccamaw River, South Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 301, pl. 20, fig. 10a.

25560. Calandrites cineratius Scudder. Cotypes.
Older Tertiary. Roan Mountains, Western Colorado.
Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p.151, pl. 12, fig. 12.

25557. Calandrites defessus Scudder. Cotypes.
Older Tertiary. Roan Mountains, Western Colorado.
Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 150, pl. 12, fig. 15.

8910. Callianassa ulrichi White. Holotype. 107355. Midway (Eocene). Little Rock, Arkansas.

White, Proc. U. S. Nat. Mus., III, 1880, p. 161; IV, 1881, p. 137,
pl. 1, figs. 9, 10.—Harris, Ann. Rept. Geol. Surv. Ark., 1872,
II, p. 36, pl. 1, figs. 2a, 2b.

113046. Calliostoma aphelium Dall. Holotype.

Miocene. Jones Wharf, Patuxent River, Maryland.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 400, pl. 22, fig. 29.

Oligocene. Ten Mile Creek, near Baileys Ferry, Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 404, pl. 18, fig. 10.

Miocene. Natural Well, Duplin County, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p.
pl. 23, fig. 20.

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- 114 BULLETIN 53, UNITED STATES NATIONAL MUSEUM.
- 113042. Calliostoma (eboreum Wagner var.?) wagneri Dall.

Holotype.

Holotype.

Miocene. Wescott Farm, Church Hill, Maryland.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 399, pl. 21, fig 3.

113049. Calliostoma erosum Dall. Holotype.

Croatan (Pliocene). Neuse River, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 400, pl. 18, fig 7.

113041. Calliostoma exile Dall.

Oligocene. Alum Bluff, Chattahoochee River, Florida.

Dall, Trans Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 397.

113038. Calliostoma grammaticum Dall. Cotypes. Oligocene. Alum Bluff, Calhoun County, Florida.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 397. pl. 18, fig. 2a.

113052. Calliostoma harrisii Dall. Holotype.

Miocene. Bellefield, Virginia.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 401, pl. 18, fig. 6.

- 113064. Calliostoma (Eutrochus) limulum Dall. Cotypes. Pliocene. Caloosaliatchie River, near Fort Thompson, Florida.
  - Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 404, pl. 18, fig. 7a.
- 113025. Calliostoma metrium Dall. Holotype. Oligocene. Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 394, pl. 22, fig. 27.

113048. Calliostoma nitens Lea. Plesiotype.

Claibornian (Eocene). Claiborne, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 400, pl. 22, fig. 30.

113021. Calliostoma philanthropus (Conrad). Plesiotype. Miocene. Near Yorktown, Virginia.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 390, pl. 18, fig. 9a.

113022. Calliostoma philanthropus basicum Dall. Cotypes. Miocene. Petersburg, Virginia.

Dall, Trans. Wagner Free Inst. Sci. Phila. III, Pt. II, 1892, p, 392.

113034. Calliostoma roseolum permagnum Dall. Cotypes. Pliocene, Caloosahatchie River, near Fort Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 395.

113036. Calliostoma virginicum (Conrad). Plesiotypes.

Miocene. Near Yorktown, Virginia.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 396, pl. 18, fig. 2.

113037. Calliostoma (virginicum var.?) aluminium Dall. Holotype.
Oligocene. Alum Bluff, Chattahoochee River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 396.

113027. Calliostoma willcoxianum Dall. Holotype.
Pliocene. Shell Creek, De Soto County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 395, pl. 18 fig. 1.

341. Callista (Dosiniopsis?) deweyi (Meek and Hayden).

Cotypes.

Montana (Cret.). Moreau River, South Dakota, and Yellowstone River, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 182, pl. 17, figs. 15a-e.

See Cytherea deweyi.

1938. Callista (Dosiniopsis) nebrascensis (Meek and Hayden).
Plesiotypes.

Fox Hills (Cret.). Deer Creek, North Platte, Wyoming.
Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 184, text fig. 15.
See Cytherea nebrascensis and Callista robusta.

231. Callista (Dosiniopsis?) orbiculata (Hall and Meek).

Plesiotypes.

Fort Benton or Colorado (Cret.). Five miles below James River, South Dakota.

Meck, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 186, pl. 5, figs.
2a-c.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 108, pl. 24, figs. 9, 10.

176. Callista (Dosiniopsis) owenana (Meek and Hayden).

Holotype.

Fox Hills (Cret.). Mouth of Judith River, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 183, pl. 37, fig. 1.

See Cytherea owenana.

418. Callista? pellucida Meek and Hayden. Holotype and paratypes.

Fort Pierre (Cret.). Missouri River, 200 miles above Milk Creek, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 187, pl. 17-figs. 10a-e.

See Cytherea pellucida.

- 1938. Callista robusta (Meek and Hayden). Cotypes.

  Montana (Cret.). Deer Creek, North Platte, Wyoming.

  Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1861, p. 443.

  =Callista (Dosiniopsis) nebrascensis.
- 162525. Callista subdiaphana pedroana Arnold. Holotype. Pleistocene. Deadman Island, off San Pedro, California. Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 144, pl. 13, fig. 2.
  - 232. Callista (Aphrodina? tenuis (Hall and Meek).

Plesiotypes.

- Fort Benton or Colorado (Cret.). Bear Creek, near base of Black Hills, South Dakota.
  - Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 188, pl. 5, figs. 1a-d.—Stanton, Bull. No. 106 U. S. Geol. Surv., 1893, p. 109, pl. 24, figs. 7, S.
- Gatun Oligocene, V. Near Gatun, Panama Canal, Panama.

  Dall, Trans, Wagner Free Inst. Sci. Phila., III. Pt. VI, 1903, p. 1260, pl. 54, fig. 1.
- 6392a. Callocardia gatunensis var. multifilosa Dall. Holotype. Gatun Oligocene. Near Gatun. Panama Canal. Panama. Pall. Trans. Wagner Free Inst. Sci. Phila. III. Pt. VI. 1903, p. 1261. pl. 54. fig. 15.
- 164870. Callocardia Pitaria? kincaidii Dall. Holotype.
  Miocene. Popof Island. Shumakins, Alaska.
  Pall, Harriman Alaska Exped., IV. 10-4, p. 115, pl. 10, fig. 1.
- 23300. Callocardia Agriopoma sayana Conrad. Holotype. Miocene. York River, Virginia.

  Pull. Trans. Wagner Free Inst. Sci. Phila., III. Pt. VI. 1903, p. 1881, pl. 521, fig. 16.
- 114747. Callocardia Agriopoma sincera Dall. Holotype. Chipola Oligocene Baileys Ferry, Chipola River, Calhoun County, Florida.
  - Pull, Trans. Wagner Free Inst. Sci. Phila., III. Pt. VI. 1903, p. 128., pl. 55, fig. 12.
  - 13044. Callonema occidentalis Walcott. Cotypes.
    Middle Devonian. Combs Peak, Eureka District, Nevada.
    Walcott, Mon. VIII. U. S. Geol. Surv., 1884. p. 189. pl. 16
    figs. 3, 54
- 43518. Callopora ampla Ulrich. Cotypes and figured sections.
  43510. Trenton Ord.: Cannon Falls and Fountain. Minnesota.
  Ulrich. Geol. and Nat. Hist. Surv. Minn.: Final Rept., III., Pt. I.
  1842. p. 281. pt. 22. dgs. 13. 15. 28. 22. 23. 27. 28.

43520. Callopora angularis Ulrich. Cotypes and figured sections. Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 277, pl. 22, figs. 37-41.

43237. Callopora cincinnatiensis Ulrich. Holotype. Cincinnatian? (Ord.). ? Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., I, 1878, p. 93, pl. 4, figs. 8, 8a.

=Lioclema occidens.

43515. Callopora crenulata Ulrich. Cotypes and figured sections. Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 284, pl. 22, figs. 18-23.

=Calloporina crenulata.

43517. Callopora dumalis Ulrich. Cotypes and figured sections.

Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 282, pl. 23, figs. 1-8.

43648. Callopora elegantula Hall. Plesiotypes and figured sections. Rochester (Sil.). Lockport, New York.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 250, pl. 11, figs. 6-6b.

43524. Callopora goodhuensis Ulrich. Cotypes and figured sections. Trenton (Ord.). Near Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn.. Final Rept., III, Pt. I, 1893, p. 282, pl. 23, figs. 9, 10, 21, 29.

43521. Callopora incontroversa Ulrich. Holotype and figured sections.

Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893. p. 278, pl. 22, figs. 33-36.

43522. Caliopora multitabulata Ulrich. Cotypes and figured 43523. Sections.

Black River (Ord.). St. Paul, Minnesota. Trenton (Ord.). Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 280, pl. 23, figs. 11, 12, 16, 17, 24, 25, 26, 30, 31.

43525 Callopora pulchella Ulrich. Cotypes and figured sections.
Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 283, pl. 22, figs, 1-12.

43526. Callopora pulchella persimilis Ulrich. Cotypes and figured section

Black River (Ord.). Near Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. . 1893, p. 284, pl. 22, figs. 13-17.

43393. Callopora subnodosa Ulrich. Cotypes and figured sections. Richmond (Ord.). Blanchester, Ohio.

Ulrich, Geol. Surv. Ill., VII, 1890, p. 417, pl. 33, figs. 5-5c.

4,3649. Callopora subplana Ulrich. Cotypes and figured sections. Lorraine (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 253, pl. 11, figs. 7-7b.

43816. Callopora undulata Ulrich. Cotypes and figured sections.
Black River (Ord.). Minneapolis and St. Paul, Minnesota.

Ulrich, Fourteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn.,
 1886, p. 95; Geol. and Nat. Hist. Surv. Minn., Final Rept.,
 III, Pt. I, 1893, p. 279, pl. 22, figs. 24-31.

40386. Calloporella harrisi Ulrich. Holotype and figured sections. 43647. Richmond (Ord.). Waynesville, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 91, pl. 1, figs. 5 5c.

· Calloporella circularis.

43515. Calloporina crenulata (Ulrich). Figured sections of cotypes.
Black River (Ord.). St. Paul, Minnesota.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 47, pl. 14, figs. 17-19.

- See Callopora crenulata.
- 43217. Calloporina parva Ulrich and Bassler. Cotypes and figured sections.

Black River (Ord.). Two miles south of Belfast, Marshall County, Tennessee.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 48, pl. 14, figs. 13-16.

38325. Calosoma heeri Sendder.

Cotypes.

Upper Miocene. Oeningen, Baden, Germany.

Scudder, Geol. Mag., Dec. IV, II, (Sq. p. (x), pl. 6, fig. 4.

25501 Calymene anchiops Green. Plastotype. Schoharie Dev. Ulster County, New York.

Sentitute 1997, Cisie: County, New 1978.

Green, Mon. Prilobites N. America, Phila., 1832, p. 35. Cast No. 5

Dalmanites Chasmops anchiops.

4016 Calymene blumenbachii Brongmart Plastotype.

Trenton Ord - Trenton Falls New York

Green, Most Dislobites N. America Philo (1912) p. 28. Cast No. :

Calvinenc callaccinala

25702. Calymene bufo Green.

Plastotype.

Devonian. New Jersey (? Patterson).

Green, Mon. Trilobites N. America, Phila., 1832, p. 41. Cast No. 10.

=Phacops bufo.

4912. Calymene bufo rana Green.

Plastotype.

Hamilton (Dev.). Seneca, Ontario County, New York.

Green, Mon. Trilobites N. America, Phila., 1832, p. 42. Casts Nos. 11, 12.

= Phacops bufo rana.

4926. Calymene callicephala Green.

Plastotype.

Lorraine? (Ord.). Near Cincinnati, Ohio.

Green, Mon. Trilobites N. America, Phila., 1832, p. 30. Cast No. 2.

See Calymene blumenbachii.

41855. Calymene callicephala Green, var.

Plesiotype.

Richmond (Ord.). Three miles north of Spring Valley, Minnesota:

Clarke, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 700.

4924. Calymene diops Green.

Plastotype.

Devonian. Ohio.

Green, Mon. Trilobites N. America, Phila., 1833, p. 37. Cast No. 8.

= Proetus diops.

4927. Calymene microps Green.

Plastotype.

Lorraine? (Ord.). Near Ripley, Ohio.

Green, Mon. Trilobites N. America, Phila., 1832, p. 34. Cast No. 6.

= Pterygometopus microps.

41871. Calymene nasuta Ulrich.

Cotype.

Niagara (Sil.) Osgood, Indiana.

Ulrich, Journ. Cincinnati, Soc. Nat. Hist., II, 1879, p. 132, fig. 3.

=Calymenella nasuta.

4918. Calymene phlyctainodes Green.

Plastotype.

Niagara (Sil.). Springfield, Ohio-

Green, Am. Journ. Sci., XXXII, 1837, p. 167. Cast No. 54.

4908. Calymene platys Green.

Plastotyne

41872. Schoharie (Dev.). Helderberg Mountains, New Yo

Green, Mon. Trilobites N. America, Phila., 1832, p. 32. Nos. 4 and 5. 4947. Calymene rowii Green. Plastotype.
Hamilton (Dev.). Fly Creek, Otsego County, New York.
Green, Amer. Journ. Sci., XXXIII, 1838, p. 406. Cast No. 49.

= Proetus rowi.

5004. Calymene selenecephala Green. Plastotype.
Ordovician? New York.

Green, Mon. Trilobites N. America, Phila., 1832, p. 31. Cast No. 3.

15363. Camarella antiquata Billings. Plesiotype. Lower Cambrian. East of Swanton, Vermont.

> Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 122, pl. 7, fig. 8; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 613, pl. 72. fig. 3.

24628. Camarella? minor Walcott. Cotype.

Lower Cambrian. Near Stissingville, Dutchess County,

New York.

Walcott, Proc. U. S. Nat. Mus., XII, 1889, p. 36; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 614, pl. 72, figs. 4-4d.

46549. Camarocladia dichotoma Ulrich and Everett, Figured sections of cotype.

Stones River (Ord.). Dixon, Illinois.

Ulrich and Everett, Geol. Surv. Ill., VIII, 1890, p. 281, pl. 7, figs. 1a, 1b.

27760. Camarocrinus saffordi Hall. Plesiotype.
Helderbergian (Dev.). Allen's Mill, Benton County,
Tennessee.

Schuchert, Smithsonian Misc. Coll., Quart., XLVII, 1904, pl. 40, fig. 10.

35080. Camarocrinus stellatus Hall. Plesiotype.
Manlius (Sil.). Near Keyser, West Virginia.

Schuchert, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 269, pl. 44, figs. 1-5.

35084. Camarocrinus ulrichi Schuchert. Cotypes.
35085. Helderbergian (Dev.). One and one-eighth miles south
of Franks and 3 miles northeast of Daugherty, Indian
Territory.

Schuchert, Amer. Geol., XXXII, 1903, p. 239; Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 271, pl. 40, figs. 6-8, pls. 41-43.

35086. Camarocrinus ulrichi stellifer Schuchert. Holotype and paratype.

Helderbergian (Dev.). Tishomingo quadrangle, and two miles south of Franks, Indian Territory.

Schuchert, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 272, pl. 40, fig. 9; pl. 41, fig. 6.

14348. Camarophoria cooperensis (Shumard)? Plesiotype.

Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 224, pl. 18, fig. 6.

- 35173. Camarophoria ringens (Swallow). Plesiotype.

  Madison (Miss.). Gallatin Range, Yellowstone National
  Park.
  - Girty, Mon. XXXII, U.S. Geol. Surv., Pt. II, 1899, p. 537, pl. 69, figs. 1a, 1b, 1c.
- 14451. Camarotœchia contracta (Hall). Plesiotypes.
- 33939 Ouray (Upper Dev.). At many localities of the Ouray to Limestone in Central Colorado.
- 33943. Girty, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 57, pl. 7, figs. 2-4.
- 7798. Camarotœchia endlichi (Meek). Cotypes and plesiotypes.

  14448. Ouray (Upper Dev.). At many localities in the Ouray

33944 Limestone of Central Colorado.

to Girty, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 56, 33948. pl. 6, figs. 1-4; pl. 7, fig. 1.

See Rhynchonella endlichi.

- 35174. Camarotæchia herrickana Girty. Cotypes.
- 35175. Madison (Miss.). Crowfoot Ridge and Divide between Gallatin River and Panther Creek, Yellowstone National Park.
  - Girty, Mon. XXXII, U. S. Geol. Surv., Pt. II, 1899, p. 539, pl. 69, figs. 2a, 2b, 2c.
- 35176. Camarotœchia metallica (White). Plesiotypes.
- 35177. Madison (Miss.). Yellowstone National Park.
  - Girty, Mon. XXXII, U. S. Geol. Surv., Pt. II, 1899, p. 540, pl. 69, figs. 3b, 3c, 3d, 3e.
- 39910. Campanulites tessellatus Troost. Chirotype.
  Ordovician. Duck River, near Columbia, Maury County,
  Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 60.

- 7619. Campeloma macrospira Meek. Holotype.
  Bear River (Cret.). Bear River Valley, Southwestern
  Wyoming.
  - White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883), Pt. I, p. 102, pl. 30, fig. 2a; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 469, pl. 8, figs. 6, 7; Bull. No. 128, U. S. Geol. Surv., 1895, p. 60, pl. 10, figs. 2, 3.
- 8139. Campeloma multilineata Meek and Hayden. Plesir 9029. Laramie (Cret.). Heart River, North Dakota, an Creek, Colorado.
  - White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 469, figs. 1-7.

9029. Campeloma multilineata Meek and Hayden. Plesiotypes.

Laramie (Cret.). Crow Creek, Northern Colorado.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883),
Pt. I, p. 101, pl. 28, figs. 4a, 4b; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 469, pl. 27, figs. 1, 7.

2154. Campeloma multilineata (Meek and Hayden). Holotype and paratypes.

Laramie (Cret.). Fort Clark, North Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 586, pl. 44, figs. 1a, 1b.

See Paludina multilineata.

2148. Campeloma multistriata (Meek and Hayden). Holotype and paratypes.

Laramie (Cret.). Mouth of Yellowstone River, North Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 588, pl. 43, figs. 15a-e.

See Melania multistriata.

8140. Campeloma producta White. Holotype and plesiotypes.
Laramie (Cret.). Valley of Yellowstone River, Montana.

White, Proc. U. S. Nat. Mus., V, 1882, p. 97, pl. 3, figs. 7-9; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 469, pl. 26, figs. 21-24 (25?), 26, 27.

2153. Campeloma vetula (Meek and Hayden). Holotype and paratypes.

Laramie (Cret.). Bad Lands of Judith River, Montana.

Meck, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 587, pl. 42, figs. 14a, 14b.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 469, pl. 27, figs. 8, 9.

See Paludina vetula.

680. Camptonectes bellistriatus (Meek). Cotypes.

Jurassic. Red Buttes, North Platte, Wyoming.

Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 77, text fig. 3.—Meek, Rept. Expl. Great Basin of Utah, Simpson, 1876, p. 356, App. J. pl. 3, figs. 3a, 3d.

See Pecten bellistriata.

1885. Camptonectes bellistriatus (Meek). Plesiotype.

Jurassic. Big Horn Mountains, Wyoming-

Stanton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 613, pl. 72, fig. 12.

12330. Camptonectes bellistriatus (Meek). Plesiotype.
Jurassic. Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources, Black Hills, Dakota, 1880, p. 351, pl. 4, fig. 7. 28933. Camptonectes bellistriatus distans Stanton. Cotypes.

Jurassic. Yellowstone National Park.

Stanton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 614, pl. 72, fig. 13.

221. Camptonectes? extenuatus (Meek and Hayden). Cotypes.
Jurassic. Southwest base of Black Hills, South Dakota.

Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 78, pl. 3, fig. 6.

See Pecten extenuatus.

12335. Camptonectes extenuatus Meek and Hayden. Plesiotype.

Jurassic. East of Belle Fourche River, near Bear Lodge,
Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources, Black Hills, Dakota, 1880, p. 353, pl. 4, fig. 4.

12552. Camptonectes extenuatus Meek and Hayden. Plesiotype.

Jurassic. Northwest of Rawlings, Wyoming.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 290, pl. 7, fig. 18.

12535. Camptonectes pertenuistriatus Hall and Whitfield.

Holotype.

Jurassic. Northwest of Rawlings, Wyoming.

Hall and Whitfield, Rept. U. S. Geol. Expl., 40th Par., IV, Pt. II, 1877, p. 291, pl. 7, fig. 17.

28934. Camptonectes pertenuistriatus Hall and Whitfield.

Plesiotype.

Jurassic. Yellowstone National Park.

Stanton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 614, pl. 72, fig. 11.

8643. Camptonectes platessa White. Holotype.
Colorado (Cret.). Five miles west of Mineral Spring,

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 1874,
p. 25; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I,
1876, p. 176, pl. 18, fig. 5a.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 72, pl. 9, fig. 6.

8179. Camptonectes platessiformis White. Holotype.
Jurassic. North base of Aquarius Plateau, Southern Utah.
White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883),
Pt. I, p. 143, pl. 37, fig. 5a.

8580. Camptonectes stygius White. Cotypes.

Jurassic. Bluff south of Dirty Devil River and North Fork

of Virgin River, Utah.

White, Prelim. Rept. U. S. Geor. Surv. W. 100th Merid., p. 23; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, 1 1876, p. 164, pl. 13, figs. 2a-c.

111516. Cancellaria alternata Conrad. Plesiotype.

Miocene. Shiloh, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 112, pl. 20, figs. 5-10.

115471. Cancellaria barretti Guppy. Holotype.

Miocene. Jamaica, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 289, pl. 17, fig. 11.

97354. Cancellaria conradiana Dall. Holotype. Pliocene. Caloosahatchie River, near Fort Thompson.

Phocene. Caloosanatchie River, near Fort Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 42, pl. 3, fig. 13.

115472. Cancellaria epistomifera Guppy. Holotype.

Miocene. Haiti, West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXXII, 1876, p. 520, pl. 28, fig. 9.

115470. Cancellaria lævescens Guppy. Holotype.

Miocene. Jamaica, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 289, pl. 17, fig. 12.

22926. Cancellaria malachitensis Stanton. Cotypes.

Colorado (Cret.). Near Malachite, Huerfano Park, Colorado.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 158, pl. 33, figs. 6, 7.

115473. Cancellaria moorei Guppy. Holotype.

Miocence. Jamaica, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 289, pl. 17, fig. 7.

113762. Cancellaria rowelli Dall. Holotype.

Oligocene? Potrero, Rio Amina, Santo Domingo, West Indies.

Dall, Proc. U. S. Nat. Mus., XIX, 1896, p. 307, pl. 29, fig. 1.

115474. Cancellaria scalatella Guppy. Holotype.

Oligocene. Jamaica, British West Indies.

Guppy, Geol. Mag. London, Dec. II, I, 1874, p. 408, pl. 17, fig. 4.

1:3186. Cancellaria (Trigonostoma) sericea Dall. Holotype.

Pliocene. Shell Creek, De Soto County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 224, pl. 14, figs. 7, 7a.

20128. Cancellaria turneri White. Cotype.

Chico-Tejon (Cret.). Martinez, Contra Costa County, California.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 25, pl. 3, figs. 6, 7.

97355. Cancellaria venusta Tuomey and Holmes. Plesiotypes.
Pliocene. Caloosahatchie River, near Fort Thompson
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 43, pl. 3, fig. 12.

157510. Cancer proavitus Packard.

Cotype.

Miocene. Gay Head, Massachusetts.

Packard, Proc. Amer. Acad. Arts and Sci., XXXVI, 1900, p. 3.

Montana (Cret.). Julesburg, Sedgwick County, Colorado.
White, Proc. U. S. Nat. Mus., IV, 1881, p. 138, figs. 1, 2.

255. Cantharus (Cantharulus) vaughani (Meek and Hayden).
Holotype.

Fox Hills (Cret.). Near mouth of Heart River, North Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 379, pl. 32, figs. 5a, 5b, and text fig. 48.

See Fusus vaughani.

9840. Caprina occidentalis Conrad.

Holotype.

Fredericksburg (Cret.). Near mouth of Puercos [Pecos] River, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. 2, 1857, p. 147, pl. 2, figs. 1a-c.

9891. Caprina planata Conrad. Cotypes.
Cretaceous. Oak Creek, near Puercos [Pecos] River,
Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. 2, 1857, p. 147, pl. 2, figs. 2a, 2b.

12496. Capsa texana Conrad.

Holotype.

Washita? (Lower Cret.). Leon Springs, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. 2, 1857, p. 164, pl. 21, fig. 6.

251. Capulus fragilis Meek and Hayden. Holotype Fox Hills (Cret.). Fox Hills, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 67. = Acmæa? papillata.

3630. Cardinia? costata (J. Morris). Cotypes. Carboniferous. District of Illawarra, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 692, Atlas, pl. 4, figs. 8a-c.

3672. Cardinia? cuneata Dana.

Coty

Carboniferous. Wollongong Point, Illawarra, New So Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 692, Atlas, pl. figs. 6-6d. 8174. Cardinia præcisa White.

dinia præcisa White. Holotype.

Jurassic. Near Lower Canyon of Yellowstone River,

Montana.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883), Pt. I, p. 149, pl. 37, figs. 7a, 7b.

3648. Cardinia? recta Dana.

Holotype.

Carboniferous. District of Illawarra, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 691, Atlas, pl. 4, fig. 5.

23050. Cardiniopsis unioides Stanton.

Cotypes.

Knoxville (Cret.). Three miles northwest of Paskenta, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 55, pl. 7, fig. 5; pl. 8, fig. 1; pl. 9, fig. 1; pl. 10, fig. 1.

30201. Cardioceras dubium Hyatt.

Cotypes.

Jurassic. Texas Ranch, Calaveras County, California.

Hyatt, Bull. Geol. Soc. Amer., V, 1894, p. 420.

14400. Cardiola? filicostata Walcott.

Holotype.

Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 251, pl. 22, figs. 4, 4a.

14180. Cardiomorpha missouriensis Shumard. Plesiotypes.

Lower Carboniferous. Eberhardt Mills, White Pine Dis-

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 277, pl. 6, figs. 1, 2.

164592. Cardita (Carditamera) catharia Dall.

trict, Nevada.

Holotype.

Pliocene. Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1416, pl. 56, fig. 1.

9847. Cardita eminula Conrad.

Holotype.

Washita? (Lower Cret.). Leon Springs, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. 2, 1857, p. 150, pl. 6, fig. 8.

115668. Cardita (Carditamera) guppyi Dall.

Holotype.

Pliocene. Matura, Trinidad.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1413, pl. 56, fig. 3.

13405. Cardita planicosta (Lamarck).

Plesiotypes.

Eocene. Albany, Willamette Valley, Oregon.

White, Bull. No. 18, U. S. Geol. Surv., 1885, pp. 7-9, pl. 1, figs. 1-3.

9900. Cardita planicosta (Lamarck). Plesiotypes. Eocene. Arroyo las Minas, between Eagle Pass and Leon,

Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. 2, 1857, p. 161, pl. 19, figs. 2a, 2b.

109281. Cardita (Carditamera) prestoni Dall. Holotype.
Miocene. Prestons Sink, near Waldo, Alachua County,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1415, pl. 53, fig. 14.

135125. Cardita (Carditamera) recta (Conrad) var.? Holotype. Oligocene. Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 189, pl. 11, fig. 4.

=Cardita (Carditamera) tegea.

115669. Cardita scabricostata Guppy. Holotype.

Miocene. Jamaica, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 293, pl. 18, fig. 10.

164549. Cardita serricosta Heilprin. Holotype. Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, pl. 38, fig. 9.

= Venericardia serricosta.

3502. Cardita subtenta Conrad.

Holotype.

Miocene. Astoria, Oregon.

Conrad, Wilkes U. S. Expl. Exped., X, 1849, p. 726, Atlas, pl. 18, figs. 12, 12a.

9828. Cardita subtetrica Conrad.

Holotype.

Cretaceous? Rio Bravo del Norte, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. 2, 1857, p. 164, pl. 21, fig. 5.

135125. Cardita (Carditamera) tegea Dall.

Holotype.

Oligocene. Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1412.

See Cardita (Carditamera) recta var.?

164590. Cardita (Carditamera) vaughani Dall.

Holotype.

Miocene. Jackson Bluff, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1414, pl. 56, fig. 10.

11610. Carditamera arata Conrad.

Plesioty

11611. Miocene. Shiloh, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 57, pl. 9, 1 5, 6.

114759. Cardium acrocome Dall.

Olimpung Chinals Bisser Callege County Florida

Oligocene. Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1081, pl. 48, fig. 2.

157549. Cardium (Trigoniocardia) alicula Dall. Holotype. Oligocene. Ballast Point, Tampa Bay, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V. 1900, p. 1103, pl. 40, fig. 12; pl. 48, fig. 5.

113800. Cardium (Trigoniocardia) aminense Dall. Holotype. Oligocene. Potrero, Rio Amina, Santo Domingo.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1104, pl. 48, fig. 11.

107384. Cardium (Trigoniocardia) apateticum Dall. Holotype. Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1105, pl. 48, fig. 6.

157456. Cardium (Fragum) arestum Dall. Holotype.

Pliocene. Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1102, pl. 40, fig. 10.

115667. Cardium (Trachycardium) var.? bowdenense Dall. Cotypes.

Bowden Marl (Oligocene). Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1087.

30232. Cardium (Granocardium) budaense Shattuck. Cotypes. Buda (Lower Cret.). Near Austin, Texas.

Shattuck, Bull. No. 205, U. S. Geol. Surv., 1903, p. 25, pl. 13, figs. 2-4.

114762. Cardium (Papyridea) bulbosum Dall. Holotype.
Oligocene. Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1109, pl. 48, fig. 20.

114770. Cardium (Fragum) burnsii Dall. Holotype. Oligocene. Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V. 1900, p. 1101, pl. 48, fig. 15.

115666. Cardium castum Guppy. Holotype. Eccene. Manzanilla, Trinidad, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 582, pl. 26, fig. 4.

114757. Cardium (Trachycardium) cestum Dall. Holotype. Oligocene. Chipola River. Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V. 1900. p. 1083, pl. 48, fig. 14. 114765. Cardium (Cerastoderma) chipolanum Dall. Holotype. Oligocene. Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1098, pl. 40, fig. 8.

114769. Cardium (Lævicardium) compressum Dall. Holotype. Oligocene. Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1109, pl. 48, fig. 21.

9882. Cardium congestum Conrad. Cotypes. Washita? (Lower Cret.). Rio San Pedro, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. 2, 1857, p. 149, pl. 6, figs. 5a-d.

111595. Cardium (Cerastoderma) craticuloides (Conrad).

Plesiotype.

Miocene. Shiloh, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 66, pl. 10, figs. 16-19.

107393. Cardium ctenolium Dall. Holotype. Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1081, pl. 40, fig. 13.

7855. Cardium curtum (Meek and Hayden). Plesiotypes.
Montana (Cret.). Chalk Creek, near Uptown, Utah.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 151, pl. 15, fig. 3.

1917. Cardium (Hemicardium?) curtum Meek and Hayden.

Holotype.

Montana (Cret.). Head of Gros Ventres River, Wyoming. Meek and Hayden, Proc. Acad. Nat. Sci. Phila. for 1861, p. 442.

135123. Cardium dalli Heilprin. Holotype.
Pliocene Caloosahatchie River, near Fort Thompson,
Florida.

Heilprin, Trans. Wagner Free Inst. Sci. Phila., I, 1887, p. 131, pl. 16a, fig. 7o.

157525. Cardium (Trachycardium) delphicum Dall. Holotype.
Oligocene. Ballast Point, Tampa Bay, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1084, pl. 48, fig. 18.

113688. Cardium (Trachycardium) dominicanum Dall. Holotype.
Oligocene. Near Gatun, Panama Canal.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1082, pl. 48, fig. 16.

107383. Cardium (Cerastoderma) druidicum Dall. Holotype.
Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1094, pl. 40, fig. 7.

9868. Cardium (Protocardia) filosum Conrad. Washita (Lower Cret.). Leon Springs, Texas.

> Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. 2, 1857, p. 150, pl. 6, figs. 7a, 7b.

135241. Cardium (Fragum) gatunense Dall. Cotypes. Eocene. Gatun, Isthmus of Darien.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1100.

7905. Cardium? kansasense Meek. Holotype and paratypes. Mentor (Cret.). Twelve miles southwest of Salina, Kansas.

> Meek, Fourth Ann. Rept. U. S. Geol. Surv. Terr., 1871, p. 307; Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 170, pl. 2, figs. 14a-d.

145861. Cardium (Cerastoderma) leptopleura (Conrad) var? 145933.

Plesiotypes.

Miocene. Plum Point, Maryland.

Dall, Trans. Wagner Free Inst. Sci. Phile., III, Pt. V, 1900, p. 1095.

1834. Cardium linteum Conrad. Holotype. Eocene. Canada de las Uvas, California.

> Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, V, 1856, p. 320, pl. 2, fig. 1.

=Cardium. (Lævicardium) linteum.

135881. Cardium (Trachycardium) malacum Dall. Holotype. Oligocene. Oak Grove, Santa Rosa County, Florida.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1087, pl. 48, fig. 4.

115665. Cardium (Trigoniocardia) maturense Dall. Holotype. Pliocene. Matura, Trinidad, West Indies.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1105, pl. 48, fig. 7.

9860. Cardium mediale Conrad.

Holotype.

Lower Cretaceous. Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, pt. 2, 1857. p. 149, pl. 4, figs. 4a, 4b.

1864. Cardium modestum Conrad.

Holotype.

Miocene. San Diego, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, V, 1856, p. 322, pl. 3, fig. 15. (See Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1092.)

509. Cardium multiradiatum Gabb.

Holotype.

Ripley (Cret.). Eufaula, Alabama.

Gabb, Journ. Acad. Nat. Sci. Phila., IV, 2d ser., 1860, p. 395, pl. 68, fig. 29.

[Not Cardium multiradiatum Sowerby. T. W. Stanton.]

=Cardium alabamense.

9858. Cardium (Protocardia) multistriatum (Shumard).

Plesiotypes.

Washita? (Lower Cret.). Leon Springs, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 149, pl. 6, figs. 4a-c..

157535. Cardium (Trachycardium) ædalium Dall. Cotypes.
Pliocene. Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1088.

107390. Cardium (Cerastoderma) pansatrum Dall. Holotype. Oligocene. Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1093, pl. 40, fig. 14.

Oligocene. Alum Bluff, Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1086, pl. 48, fig. 17.

7832. Cardium pauperculum Meek. Cotypes.
Fort Benton (Cret.). Twenty miles west of Fort Bridger,
Wyoming.

Meek, Fourth Ann. Rept. U. S. Geol. Surv. Terr., 1871, p. 306.— White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1877 (1879), p. 291, pl. 9, fig. 3a.

22880. Cardium pauperculum Meek. Plesiotypes.

22881. Colorado (Cret.). Huerfano Park, Colorado; Bear River 22882. City, Wyoming, and Coalville, Utah.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 99, pl. 22, figs. 9-12.

See Cardium subcurtum.

1949. Cardium pertenue Meek and Hayden. Holotype.

Montana (Cret.). Deer Creek, North Platte, Wyoming.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1861, p. 442.

= Protocardia (Leptocardia) pertenuis.

157570. Cardium (Cerastoderma) phlyctaena Dall. Holotype. Oligocene. Ballast Point, Tampa Bay, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1097, pl. 48, fig. 13.

136748. Cardium (Trachycardium) precursor Dall. Holotype. Oligocene. Vicksburg, Mississippi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1086, pl. 48, fig. 10.

Oligocene. Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1080, pl. 48, fig. 12.

- 7897. Cardium (Protocardia) salinaense Meek. Cotypes. Mentor (Cret.). Twelve miles southwest of Salina, Kansas. Meek, Fourth Ann. Rept. U. S. Gecl. Surv. Terr., 1871, p. 306.
- 12394. Cardium scitulum Meek. Holotype.
  Nanaimo (Cret.). Nanaimo, Vancouver Island.
  Meek, Trans. Albany Inst., IV, 1857, p. 40.
  = Protocardia scitula.
- Oligocene. Chipola River, Calhoun County, Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1104, pl. 48, fig. 8.
  - 190. Cardium speciosum Meek and Hayden. Holotype and paratypes.

    Fox Hills (Cret.). Bad Lands of Judith River, Montana.

    Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 274.
  - 190. Cardium (Criocardium) speciosum (Meek and Hayden).

    Holotype and paratype.
    Fox Hills (Cret.). Mouth of Judith River, Montana.

    Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 169, pl. 37, figs. 4a-c.
  - 8049. Cardium (Ethmocardium) speciosum (Meek and Hayden).
    Plesiotypes.
    Fox Hills (Cret.). Nine miles west of Greeley, Colorado.
    White, Proc. U. S. Nat. Mus., II, 1879, pp. 291, 292.
- 157547. Cardium (Papyridea) spinosum turtoni Dall.

  Holotype.

  Pliocene. Caloosahatchie River, Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila, III, Pt. V, 1900.
  p. 1108.
- Cotypes.
  Colorado (Cret.). Chalk Hill, near Coalville, Utah.

  Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 152, pl. 15, fig. 3a.

   Cardium pauperculum.
- 146223. Cardium (Cerastoderma) tæniopleura Dall. Cotypes.

  Miocene. Suffolk, Virginia.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900,
  p. 1095, pl. 49, figs. 1, 2.
- 135879. Cardium (Cerastoderma) taphrium Dall. Holotype.
  Oligocene. Santa Rosa County, Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900,
  p. 1098, pl. 40, fig. 9.

9884. Cardium (Protocardia) texanum Conrad. Holotype. Washita (Lower Cret.). Between El Paso and Frontera, Texas.

Conrad, Rept. U. S. Mexican Bound Surv., Emory, I, Pt. 2, 1857, p. 150, pl. 6, figs. 6a-c.

30233. Cardium (Protocardia) texanum Conrad. Plesiotypes. Buda (Low. Cret.). Near Austin, Texas.

Shattuck, Bull. No. 205, U. S. Geol. Surv., 1903, p. 25, pl. 13, figs. 5-7.

8060. Cardium trite White. Cotypes. Colorado (Cret.). Head of Waterpocket Canyon, Southern Utah.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1877 (1879), p. 291, pl. 5, fig. 4b.

Oligocene. Near Bailey Ferry, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900.
p. 1086, pl. 48, fig. 1.

113819. Cardium (Cerastoderma) waltonianum Dall. Holotype.
Oligocene (?). Near Argyle Post Office, Walton County,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1093, pl. 48, fig. 19.

157552. Cardium (Trigoniocardia) wilcoxi Dall. Holotype. Pliocene. Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1106, pl. 48, fig. 9.

113843. Caricella claibornensis Harris. Holotype. Claibornian (Eocene). Claiborne, Alabama. Harris, Bull. Amer. Pal., I, 1875, p. 49.

111814. Caricella podagrina Dáll.

Cotypes.

Eocene. Garland Creek, Mississippi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 86; Ibidem, Pt. II, 1892, p. 228, pl. 20, fig. 9 (as Scaphella (Caricella) podagrina).

107138. Carinaria caperata Guppy. Holotype.
Upper Oligocene. Ally Creek, Naparima, Trinidad, West
Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 318, pl. 27, fig. 14.

45736. Carinaropsis acuta Ulrich and Scofield. Cotypes.
45737. Black River (Ord.). Cannon Falls and near Fountain,
Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 928, pl. 62, figs. 6-9.

Plesiotypes.

45738. Carinaropsis cunulæ Hall.

Trenton (Ord.). Nashville, Tennessee.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 927, pl. 62, figs. 10-13.

45739. Carinaropsis cymbula Hall. Plesiotypes. Trenton (Ord.). Near Danville, Kentucky.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 927, pl. 62, figs. 1-4.

45740. Carinaropsis explanata Ulrich. Holotype.
Trenton (Ord.). Covington, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 929, pl. 62, fig. 5.

45741. Carinaropsis minima Ulrich and Scofield. Holotype. Black River (Ord.). Near Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 929, pl. 62, fig. 19.

45742. Carinaropsis phalera Sardeson. Plesiotypes

45743. Black River (Ord.). St. Paul and Chatfield, Minnesota-Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final

12542. Carinifex (Vorticifex) binneyi Meek. Cotypes. Tertiary. Fossil Hill, Kawsoh Mountains, Nevada.

Rept., III, Pt. II, 1897, p. 928, pl. 62, figs. 14-18.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 187, pl. 17, figs. 11, a.

12544. Carinifex (Vorticifex) tryoni Meek. Cotypes.
Tertiary. Fossil Hill, Kawsoh Mountains, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 188, pl. 17, figs. 10a, b.

13416. Carinifex (Vorticifex) tryoni concava Meek. Cotypes. Tertiary. Fossil Hill, Kawsoh Mountains, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 189, pl. 17, fig. 10c.

135126. Carolia (Wakullina) floridana Dall. Cotypes. 154336. Oligocene. Deep Creek, near Sopchoppy River, Wakulla County, Florida.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 21; Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 777, pl. 24, fgs. 5, 6, 6b, 7, 7b.

154335. Carolia Carolia jamaicensis Dall. Holotype. Eocene? Cambridge, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898. p. 776, pl. 33, fig. 21.

46578. Carpomanon stellatim-sulcatum Roemer). Plesiotypes.
40579. Brownsport Sil., Hardin County, Tennessee; and
Marion County, Kentucky.

Rauff, Palaeontographica, XL, 1894, p. 325, pl. 12, figs. 10, 11.

39907. Caryocrinites globosus Troost. Chirotype. Silurian. Decatur County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 60.

39905. Caryocrinites granulatus Troost. Chirotypes. Silurian. Decatur County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 60.

39906. Caryocrinites hexagonus Troost. Chirotypes. Silurian. Decatur County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 60.

39904. Caryocrinites insculptus Troost. Chirotypes.
Silurian. Decatur County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 60.

157509. Caryophyllia arnoldi Vaughan. Holotype.
Pleistocene. San Pedro Hill, San Pedro, California.

Vaughan in Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 86, pl. 3, figs. 4. 4a.

164737. Caryophyllia californica Vaughan. Holotype. Pliocene. Deadman Island, off San Pedro, California.
 Vaughan in Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 87, pl. 3, figs. 2, 2a.

158213. Caryophyllia dalli Vaughan. Holotype.

Jacksonian (Eocene). Montgomery, Louisiana.

Vaughan, Mon. XXXIX. U. S. Geol. Surv., 1900, p. 110, pl. 0.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 110, pl. 9, figs. 2-2c.

8083. Caryophyllia egeria White. Cotypes.

Montana (Cret.). Valley of Sage Creek, Northwestern
Colorado.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1877 (1879), p. 275, pl. 6, figs. 7a, 7b.

8084. Caryophyllia johannis White. Cotypes.

Montana (Cret.). Cimarron, New Mexico.

White Fleventh Aug. Rept. II S. Geol. Surv. Terr. 1877 (1870)

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1877 (1879), p. 274, pl. 6, figs. 6a, 6b.

164736. Caryophyllia pedroënsis Vaughan. Holotype.
Pleistocene. San Pedro, California.

Vaughan in Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 87,
pl. 3, figs. 3, 3a.

158214. Caryophyllia texana Vaughan. Paratype.
Lower Claibornian (Eocene). San Augustine, Texas.
Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 111.

46548. Caryospongia juglans nuxmoschata Hall. Plesiotype Waldron (Sil.). Waldron, Indiana.

Rauff, Palaeontographica, XL, 1894, p. 310, pl. 11, fig. 6.

9901. Cassidula alveata Conrad.

Plesiotype.

Tertiary. Western Texas.

Conrad, Rept. U. S.-Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 163, pl. 19, figs. 9a-b.

21890. Cassidulus porrectus Clark.

Holotype.

Ripley (Upper Cret.). Eufaula, Alabama.

Clark, Johns Hopkins Univ. Circ., No. 87, 1891, p. 76; Bull. No. 97, U. S. Geol. Surv., 1893, p. 72, pl. 33, figs. 1a-b; pl. 34, figs. 1a-b; pl. 35, figs. 1a-id.

20268. Cassidulus stantoni Clark.

Holotype.

Colorado (Upper Cret.). Muddy Creek, Huerfano Park, Colorado.

Clark, Johns Hopkins Univ. Circ., No. 87, 1891, p. 76; Bull. No. 97, U. S. Geol. Surv., 1893, p. 73, pl. 35, figs. 2a-d.

20264. Cassidulus subconicus Clark.

Holotype.

Ripley (Upper Cret.). Dumas, Mississippi.

Clark, Johns Hopkins Univ. Circ., No. 87, 1891, p. 76; Bull. No. 97, U. S. Geol. Surv., 1893, p. 71, pl. 32, figs. 1a-1k.

20264. Cassidulus subquadratus Conrad.

Plesiotype.

Ripley (Upper Cret.). Holly Springs, Mississippi.

Clark, Bull. No. 97, U. S. Geol. Surv., 1893, p. 70, pl. 31, figs. 1a-h.

8633. Cassiope whitfieldi White.

Cotypes.

Colorado (Cret.). Head of Le Verken Creek, Utah.

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 1874,
p. 27; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I,
1876, p. 196, pl. 18, fig. 1a.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 132, pl. 29, fig. 1.

= Glauconia coalvillensis.

9058. Cassiopella turricula White.

Cotypes.

Laramie (Cret.). Black Buttes Station, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883), Pt. I, p. 97, pl. 27, figs. 3a-d, f-g; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 464, pl. 23, figs. 25-29.

Cassis (Phalium) aldrichi Dall. See Phalium aldrichi.

Cassis (Phalium) globosum Dall. See Phalium globosum.

115504. Cassis monilifera Guppy.

Holotype.

Miocene. Jamaica, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 287, pl. 17, fig. 8.

115505. Cassis reclusa Guppy.

Cotypes.

Miocene. Jamaica.

Guppy, Geol. Mag., Dec. II, I, 1874, p. 434.

39911. Catillocrinites tennesseæ Troost.

Chirotypes.

Silurian. Decatur County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 60.

2210. Catopygus pusillus Clark. Cotypes.

Upper Cretaceous. Wordills, Monmouth County, New
Jersey.

Clark, Johns Hopkins Univ. Circ. No. 87, 1891, p. 76; Bull. No. 97, U. S. Geol. Surv., 1893, p. 65, pl. 27, figs. 3a-3d.

43279. Ceramophylla frondosa Ulrich. Cotypes and figured sections.

Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 331, pl. 28, figs. 3-7.

43280. Ceramopora imbricata Hall. Plesiotypes and figured sections.

Osgood (Sil.). Osgood, Indiana.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 463, pl. 39, figs. 1-1b.

43225. Ceramoporella distincta Uulrich. Cotypes and figured sections.

Utica (Ord.). Cincinnati, Ohio.

Ulrich, Geol. Surv. 111., VIII, 1890, p. 464, pl. 39, figs. 6, 6a.

43222. Ceramoporella distincta Ulrich. Plesiotypes.
Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 328, pl. 28, fig. 13.

43227. Ceramoporella granulosa Ulrich. Figured sections of holotype.

Richmond (Ord.). Wilmington, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 466, pl. 41, figs. 2, 2a.

43223. Ceramoporella inclusa Ulrich. Cotypes.

Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 329, pl. 28, figs. 8-11.

43226. Ceramoporella interporosa Ulrich. Holotype.
Trenton (Ord.). Near Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 330, pl. 28, fig. 12.

43224. Ceramoporella? ohioensis Nicholson. Plesictype and figured sections.

Utica (Ord.). Cincinnati, Ohio.
Ulrich, Geol. Surv. Ill., VIII, 1890, p. 466, pl. 39, figs. 2, 2a.

Cotyn

20119. Ceratia nexilia White. Cotypes.
Chico (Cret.). Near Pence's Ranch, Butte County, California.

White, Bull. No. 51, U.S. Geol. Surv., 1889, p. 21, pl. 3, figs. 13, 14.

14996. Ceratiocaris beecheri Clarke. Holotyr Naples (Dev.). Cashaqua Creek, Livingston County, No York.

Clarke, Bull. No. 16, U. S. Geol. Surv., 1885, p. 44, pl. 2, fig. 1.

27128. Ceratiocaris (Colpocaris) bradleyi Meek. Cotypes.
Waverly (Miss.). Near Danville, Kentucky.

Meek, Geol. Surv. Ohio, II, 1875, p. 318, pl. 18, figs. 6a-6e.

=Colpocaris bradleyi.

27127. Ceratiocaris (Colpocaris) elytroides Meek. Cotypes. Waverly (Miss.). Near Danville, Kentucky.

Meek, Geol. Surv. Ohio, II, 1875, p. 319, pl. 18, figs. 5a, 5b. = Colpocaris elytroides.

27129. Ceratiocaris (Solenocaris) strigata Meek. Cotypes. Waverly (Miss.). Near Danville, Kentucky.

Meek, Geol. Surv. Ohio, II, 1875, p. 321, pl. 18, figs. 4a-4c.

=Strigocaris strigata.

41506. Ceratopsis chambersi (Miller). Plesiotypes.
Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 676, pl. 46, figs. 19-22.

41335. Ceratopsis chambersi robusta Ulrich. Holotype. Richmond (Ord.). Near Spring Valley, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 677, text figs. 50 a, b.

41500. Ceratopsis intermedia Ulrich. Cotypes.
Trenton (Ord.). Bank Lick Creek, near Covington, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 676.

25695. Ceraurus pleurexanthemus Green. Plastotype.
Ordovician. Near Newport, New York.

Green, Mon. Trilobites N. America, Phila., 1832, p. 84. Cast No. 33.

115555. Cercomya ledæformis Guppy. Holotype.
Oligocene. Manzanilla, Trinidad, British West Indies.

Guppy, Quart. Journ. Geol. Soc., London, XXII, 1866, p. 581, pl. 26, fig. 1.

=Leda guppyi.

113377. Cerithidea scalata Heilprin. Cotypes.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Heilprin, Trans. Wagner Free Inst. Sci. Phila., I, 1887, p. 132, pl. 16b, fig. 71.

= Potamides (Pyeazisinus) scalatus.

293. Cerithiopsis moreauensis (Meek and Hayden). Holotype. Fox Hills (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., 1X, 1876, p. 335, pl. 31, fig 4; p. 336, text fig. 38.

See Turritella moreauensis.

113325. Cerithiopsis scariphus Dall.

Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 269, pl. 22, fig. 5.

113324. Cerithiopsis tubercularis floridana Dall. Holotype.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 269.

13408. Cerithium billingsi White. Cotypes. Chico (Cret.). Todos Santos Bay, California.

White, Bull. No. 22, U. S. Geol. Surv., 1885, p. 13, pl. 5, figs. 3-6.

113354. Cerithium burnsii Dall. Holotype.
Miocene. Alum Bluff, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 280, pl. 14, fig. 12.

113363. Cerithium callisoma Dall.

Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 282, pl. 14, fig. 8.

113348. Cerithium caloosaënse Dall. Cotypes.
Pliocene. Shell Creek, De Soto County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 279, pl. 15, figs. 9, 11.

113349. Cerithium caloosaënse heilprini Dall. Holotype.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 279, pl. 15, fig. 11b.

Oligocene. Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 285, pl. 22, fig. 7.

113368 Cerithium coccodes Dall. Holotype.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 284, pl. 22, fig. 6.

4790. Cerithium cymatophorum Dall. Hok Miocene. Penjinsk Gulf, Siberia.

Dall, Proc. U. S. Nat. Mus., XVI, 1893, p. 475, pl. 56, fig. . 113356. Cerithium floridanum Mörch. Plesiotypes.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 282, pl. 14, fig. 10.

115746. Cerethium georgianum Lyell and Sowerby. Plesiotype. Miocene. Blue Springs, Flint River, Georgia.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 278.

113364. Cerithium glaphyrea Dall.

Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 283, pl. 14, fig. 4.

113366. Cerithium glaphyrea litharium Dall. Holotype.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 284, pl. 14, fig. 9.

- 113351. Cerithium ocalanum Dall. Holotype.
  Upper Eocene. Martin Station, Hernando County, Florida.
  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 279.
- 23079. Cerithium paskentaensis Stanton. Cotypes.

  Knoxville (Lower Cret.). Three miles northwest of Paskenta, California.

  Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 71, pl. 13, figs. 5, 6.
- Upper Eocene. Jacksonboro, Scriven County, Georgia.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 281, pl. 14, fig. 11.
- 135156. Cerethium serratoides Aldrich. Holotype. Eocene. Red Bluff, Wayne County, Mississippi.

  Aldrich, The Nautilus, Vol. VII, No. 9, 1894, p. 99, pl. 4, fig. 5.
- 23080. Cerithium strigosum Stanton.

  Knoxville (Lower Cret.). Five miles north of Paskenta,
  California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 71, pl. 13, fig. 7.

Cotypes. Chico (Cret.). Todos Santos Bay, California.

White, Bull. No. 22, U. S. Geol. Surv., 1885, p. 13, pl. 5, figs. 12, 13.

90969. Cerithium vinctum Whitfield. Plesiotypes. Chickesawan (Eocene). Lisbon, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 285, pl. 22, fig. 9.

25580. Ceuthorhynchus degravatus Scudder. Holotype.
Older Tertiary. Roan Mountains, Western Colorado.
Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 132, pl. 11, fig. 12.

25549. Ceuthorhynchus evinctus Scudder. Holotype. Florissant (Oligocene). Florissant, Colorado. Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 130, pl. 11, fig. 13.

46109. Chænocardia ovata Meek and Worthen. Plastotype. Coal Measures. Grundy County, Illinois.

Meek and Worthen, Geol. Surv. Ill., v, 1873, p. 586, pl. 27, figs.

Meek and Worthen, Geol. Surv. 111., v, 1873, p. 586, pl. 27, ngs. 5 a, b.

46170. Chænodomus typicalis Ulrich. Cotypes. Richmond (Ord.). Waynesville, Ohio.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 477, fig. 5.

=Cymatonota typicalis.

1018. Chænomya cooperi (Meek and Hayden). Holotype. Upper Carboniferous. Near Helena, Kansas.

Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 44, pl. 2, figs. 2a, 2b.

See Allorisma? cooperi, and Panopæa cooperi.

1019. Chænomya leavenworthensis (Meek and Hayden).

Cotypes.

Upper Carboniferous. Leavenworth, Kansas.

Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 43, pl. 2, figs. 1a, 1b.

See Allorisma? leavenworthana.

6609. Chænomya leavenworthensis (Meek and Hayden).

Plesiotypes.

Upper Carboniferous. Rock Bluff, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Neb. (Hayden), 1872, p. 216, pl. 2, fig. 9.

6809. Chænomya minehaha (Swallow). Plesiotypes. Upper Carboniferous. Plattsmouth, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Neb. (Hayden), 1872, p. 217, pl. 2, figs. 13a-13b.

43694. Chætetes compressus Ulrich. Cotypes and figured section Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 27, figs. 25-25b.

= Peronopora compressa.

3666. Chætetes crinita Lonsdale. Plesiotype. Carboniferous. Wollongong Point, Illawarra, New South

Carboniferous. Wollongong Point, Illawarra, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 711, Atlas, pl. 11, fig. 6.

8080. Chætetes? demissus White. Cotype.

Fox Hills (Cret.). Six miles south of Fort Collins, Colorado.

White, Bull. U. S. Geol. & Geogr. Surv. Terr., V, 1879, p. 220; Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1878 (1883), p. 7, pl. 21, fig. 14a.

43653. Chætetes elegans Ulrich.

Holotype.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 130, pl. 12, figs. 12, 12a.

= Discotrypa elegans.

3620. Chætetes gracilis Dana.

Holotype.

Carboniferous. Wollongong and Black Head, Illawarra, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 712, Atlas, pl. 11, figs. 10a-c.

43669. Chætetes granuliferus Ulrich.

Cotypes.

Trenton (Ord.). Frankfort, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 128, pl. 12, figs. 9-9b.

= Homotrypella granulifera.

43719. Chætetes irregularis Ulrich.

Cotypes.

Lorraine (Ord.). Hamilton, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 129, pl. 12, figs. 10-10b.

=Stigmatella irregularis.

8465. Chætetes milleporaceus (Troost).

Plesiotype.

Upper Carboniferous. Virgin Range, southwest of St. George, Utah.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 98, pl. 6, fig. 2a.

9211. Chætetes muscatinensis White.

Cotypes.

Hamilton (Dev.). Near Muscatine, Iowa.

White, Proc. Acad. Nat. Sci. Phila., 1876, p. 27.

3656. Chætetes ovata Lonsdale.

Plesiotype.

Carboniferous. Harpers Hill on the Hunter, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 712, Atlas, pl. 11, figs. 9-9b.

43683. Chætetes subglobosus Ulrich. Cotypes and figured sections. Utica (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 129, pl. 12, figs. 11-11b.

= Monotrypa subglobosa.

3619. Chætetes tasmaniensis Lonsdale. Plesiotypes.
Carboniferous. Harpers Hill on the Hunter, New South
Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 711, Atlas, pl. 11, figs. 7, 7a, 8, 8a.

43236. Chætetes venustus Ulrich.

Holotype.

Utica (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., I, 1878, p. 93, pl. 4, figs. 7, 7a.

= Crepipora venusta.

44084. Chainodictyon laxum Foerste.

Plastotypes.

Coal Measures. Near Newark, Ohio.

Foerste, Bull. Sci. Lab. Denison Univ., II, 1887, p. 81, pl. 7, figs. 8a-c.

44085. Chainodictyon laxum minor Ulrich. Plastotype. Lower Coal Measures. Seville, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 640, pl. 62, figs. 3, 3a.

109250. Chama caloosana Dall.

Cotypes.

Pliocene. Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1402, pl. 54, figs. 2, 5.

114725. Chama chipolana Dall.

Cotypes.

Chipola (Oligocene). Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1398, pl. 56, figs. 19, 20.

111615. Chama congregata Conrad.

Plesiotype.

Miocene. Shiloh, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 65, pl. 9, figs. 14-18.

114724. Chama draconis Dall.

Cotypes.

Chipola (Oligocene). Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1399, pl. 56, figs. 17, 18.

115537. Chama involuta Guppy.

Cotypes.

Oligocene. Jamaica, British West Indies.

Guppy, Geol. Mag., London, Dec. II, I, 1874, p. 436 pl. 17, fig. 5a-5c.

109251. Chama lyelli Dall. Holotype.

Oligocene. Jacksonboro, Georgia.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1399, pl. 54, fig. 3.

109248. Chama tampaensis Dall.

Holotype.

Oligocene. Tampa Bay, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1398, pl. 54, fig. 6.

109249. Chama willcoxii Dall.

Cotypes.

Pliocene. Shell Creek, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, pl. 41, figs. 5, 6, 7; Pt. VI, 1903, p. 1401.

24561. Chariocephalus tumifrons Hall and Whitfield. Cotypes.

Upper Cambrian. West side of Pogonip Mountain, White
Pine District, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 224, pl. 2, figs. 38, 39.

24643. Chariocephalus (?) tumifrons Hall and Whitfield. Plesiotypes.

Upper Cambrian. Secret Canyon, Eureka District, Nevada. Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 61, pl. 10, fig. 16.

23115. Charydrobia stachei White. Cotypes.

Bear River (Cret.). Twenty miles north of Cokeville,

Wyoming.

White, Bull. No. 128, U. S. Geol. Surv., 1895, p. 58, pl. 10, figs. 7-9.

43277. Cheilotrypa hispida Ulrich. Cotypes and figured sections. Chester (Miss.). Sloans Valley, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VII, 1884, p. 50, pl. 3, figs. 6, 6a-d.

43278. Cheilotrypa ostiolata (Hall). Plesiotypes and figured sections.

Rochester (Sil.). Lockport, New York.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VII, 1884, pl. 3, figs. 7, 7a.

38149. Cheliphlebia carbonaria Scudder. Holotype.
Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1885, p. 328, pl. 30, fig. 8; Foss. Insects N. America, 1, 1890, p. 292, pl. 16, fig. 8.

263. Chemnitzia cerithiformis (Meek and Hayden). Holotype. Fox Hills (Cret.). Moreau, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX. 187, p. 339, pl. 32, figs. 10a, 10b.

See Scalaria cerethiformis.

22916. Chemnitzia? coalvillensis (Meek). Plesiotypes. Colorado (Cret.). Coalville, Utah.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 141, pl. 30, figs. 10, 11.

Chetetes. See Chætetes.

44110. Chiloporella flabellata (Ulrich). Plesiotype and figured sections.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 381, pl. 39, figs. 5–5b. See Fistulipora flabellata.

Oligocene. Ballast Point, Tampa Bay, Florida.

Dell Tampa Wagner Free Iret Sci Phile III Ph. VI. 1999.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1295, pl. 55, fig. 23.

Oligocene. Alum Bluff and Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1198, pl. 42, figs. 4, 5a, 11; Pt. VI, 1903, p. 1294.

114739. Chione chipolana Dall. Holotype.

Chipola (Oligocene). Chipola, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1290, pl. 55, fig. 20.

136738. Chione (? Chamelea) craspedonia Dall. Holotype.
Vicksburgian (Oligocene). Vicksburg, Mississippi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903,
p. 1300, pl. 55, fig. 2.

109237. Chione erosa Dall.

Miocene. Jackson Bluff, sixteen miles southwest of Tallahassee, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1290, pl. 55, figs. 5, 8.

135887. Chione (Lirophora) glyptocyma Dall. Holotype.
Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1296, pl. 55, fig. 21.

135668. Chione (Lirophora) hendersonii Dall. Holotype.
Bowden (Oligocene). Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1295, pl. 55, fig. 22.

Plesiotype.
Pliocene. Tillys Lake, Waccamaw River, South Carolin

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 19
p. 1298.
See Venus latilirata.

109239. Chione (Chamelea) nuciformis (Heilprin). Plesiotype.
. Oligocene. Ballast Point, Tampa Bay, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1300, pl. 55, fig. 9.

109229. Chione (Chamelea) rhodia Dall. Holotype.
Oligocene. Ballast Point, near Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903. p. 1301, pl. 55, fig. 10.

109240. Chione (Chamelea) spada Dall. Holotype.
Oligocene. Ballast Point, Tampa Bay, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1301, pl. 55, fig. 13.

114848. Chione (Lirophora) ulocyma (Dall). Holotype. Miocene. Alum Bluff, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1296.

See Venus (Anaitis) ulocyma.

155311. Chione (Lirophora) victoria Dall. Holotype.
Lower Oligocene. Vicksburg, Mississippi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903. p. 1293, pl. 55, fig. 17.

1157 200. Chione Lirophora xesta Dall. Holotype.

Miocene. Alum Bluff, Calhoun County, Florida.

Pall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903. p. 1207, pl. 55, fig. 18.

103753. Chiton burnsii Dall.

Holotype.

Pliocene. Shell Creek, Florida.

Pall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903. pl. 50, figs. 5, 6.

112000. Chiton Trachyodon eocenensis Conrad . Plesiotypes. Claibornian Eocene . Claiborne, Alabama.

> Pall Trans Wagner Free Inst. Sci. Phila., III. Pt. II. 1892, P. 433

338. Chlamys nebrascensis Meek and Hayden. Cotypes.

Montana Cret. Vellowstone River, near Miles City.

Montana

Meck. Rept. U. S. Beel. Surv. Terr., IX. 1879, p. 25, pl. 16, figs. 800

See Pecten nebrascensis.

112572. Chlorostoma Omphalius exoletum Connai : Plesiotypes. Oligovene : Rallast Point Tampa Florida

Dall Trans Wagner Free Inst. So. 2504. III. Pt. II. 1892. p. 380 pt. 17 dgs. 4. 4. 113005. Chlorostoma (exoletum var?) limatum Dall. Cotypes. Miocene. Near Natural Well, Duplin County, North Caro-113006. lina, and Alum Bluff, Florida.

Dall. Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892,

30180. Chondrodonta glabra Stanton. Cotypes. Glen Rose (Lower Cret.). Near Kerrville, Texas.

> Stanton, Proc. U. S. Nat. Mus., XXIV, 1901, p. 306, pl. 26, figs. 1-3.

30181. Chondrodonta munsoni (Hill). Plesiotypes. Edwards (Lower Cret.). Nolands River at Belton, and 30182. Bartons Creek, near Austin, Texas.

> Stanton, Proc. U. S. Nat. Mus., XXIV, 1901, p. 303, pl. 25, figs. 1-5.

Chonetes (sp. undet.) Owen 1852 =Stropheodonta iowensis.

13810. Chonetes deflecta Hall. Plesiotype. Middle and Upper Devonian. Eureka District, Nevada. Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 124, pl. 2, figs.

13811. Chonetes filistriata Walcott. Cotypes. Middle Devonian. Combs Peak, Eureka District, Nevada. Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 127, pl. 13, figs. 15, 15a.

35342. Chonetes flemingi Norwood and Pratten. Plesiotypes. Upper Carboniferous. Near Grand River, Colorado. Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 352, pl. 1, figs. 17, 18.

24366. Chonetes freitasii Rathbun. Cotypes. Middle Devonian. Rio Maecuru, Brazil. Rathbun, Proc. Boston Soc. Nat. Hist., XX, 1878, p. 18.

35343. Chonetes geinitzianus Waagen. Plesiotypes. Weber (Upper Carb.). Leadville District, Colorado. Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 355, pl. 1, figs. 19, 19a.

6997. Chonetes glabra Geinitz. Plesiotypes. Upper Carboniferous. Nebraska City, Nebraska. 24530. Meek, Final Rept. U. S. Geol. Surv. Neb. (Hayden), 1872, p. 171, pl. 4, fig. 10; pl. 8, figs. 8a, 8b.

6541. Chonetes granulifera Owen. Plesiotypes.

6861.

Upper Carboniferous. Nebraska City, Nebraska. 6990. Meek, Final Rept. U. S. Geol. Surv. Neb. (Hayden), 1872, p. 170, pl. 9, fig. 10; pl. 8, fig. 7.

See Chonetes mucronata and C. variolata.

17942. Chonetes (?) iowensis Owen. Holotype.
Middle Devonian. Iowa River at Iowa City, Iowa.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, p. 584, pl. 3 A, fig. 7.

=Stropheodonta iowensis.

14978.. Chonetes lepida Hall.

Plesiotypes.

Genesee (Dev.). Bristol, New York.

Clarke, Bull. No. 16, U. S. Geol, Surv., 1885, p. 32.

14237. Chonetes loganensis Hall and Whitfield. Holotype. Waverly (Miss.). Logan Canyon, Wahsatch Range, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 253, pl. 4, fig. 9.—Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 525, pl. 68, fig. 5a.

35165. Chonetes loganensis Hall and Whitfield. Plesiotypes.

Madison (Miss.). West of Electric Peak, Yellowstone
National Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 525, pl. 68, figs. 5b, 5c.

13809. Chonetes macrostriata Walcott.

Cotypes.

Middle Devonian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 126, pl. 2, fig. 13; pl. 13, figs. 14-14c.

=Stropheodonta macrostriata.

8510. Chonetes mesoloba Norwood and Pratten. Plesiotypes.
Upper Carboniferous. Confluence of White Mountain and Black rivers. Arizona.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 123, pl. 9, fig. 7a.

35344. Chonetes mesolobus Norwood and Pratten. Plesiotypes.

Hermosa (Upper Carb.). Hermosa Creek, Durango Quadrangle, Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 357, pl. 1, figs. 20, 21, 22, 23.

1066. Chonetes mucronata Meek and Hayden. Cotypes. Upper Carboniferous. Near Fort Riley, Kansas.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., 1858, p. 262; Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 22, pl. 1, figs. 5a-5e.

=Chonetes granuliferus.

35164. Chonetes ornatus Shumard.

. . .

Plesiotypes.

Madison (Miss.). West of Electric Peak, Yellowstone National Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 527, pl. 68, figs. 4a, 4b, 4c, 4d.

8498. Chonetes platynota White. Cotypes. Upper Carboniferous. Near Santa Fé, New Mexico.

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 8 vo., 1874, p. 19; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1877, p. 121, pl. 9, figs. 6a-6e.

24429. Chonetes pusilla Hall.

Plesiotypes.

Base of Upper Devonian. Near Fort Resolution, Great Slave Lake, Canada.

Meek, Trans. Chicago Acad. Sci., I, 1868, p. 93, pl. 13, figs. 2a-2d.

15062. Chonetes variolata d'Orbigny.

Plesiotypes.

Upper Carboniferous. Weston, Missouri.

Hall, Stansbury's Expl. and Surv. Valley Great Salt Lake, Utah, 1852, p. 410, pl. 3, fig. 1a.

=Chonetes granuliferus.

6948. Chonetes verneuiliana Norwood and Pratten. Plesiotypes.

Upper Carboniferous. Four miles above mouth of Platte
River, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Neb. (Hayden), 1872, p. 170, pl. 1, figs. 10a, 10b.

666. Chonetes verneuiliana utahensis Meek.

Cotypes.

Upper Carboniferous. Near Humboldt Mountains, Nevada.

Meek, Rept. Expl. Great Basin of Utah, Simpson, 1876, p. 348, pl. 2, figs. 2-2c.

8903. Chonophyllum sedaliense White.

Holotype.

Chouteau (Miss.). Sedalia, Missouri.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883), Pt. I, p. 157, pl. 39, fig. 3.

33800. Chuaria circularis Walcott.

Cotypes.

Chuar (Algonkian). Kwagunt Valley, Grand Canyon, Arizona.

Walcott, Bull. No. 10, Geol. Soc. Amer., 1899, p. 234, pl. 27, figs. 12, 13.

115393. Cidaris anguillæ Cotteau.

Holotype.

Miocene. Anguilla, West Indies.

Cotteau, Kongl. Svenska Vet-Akad. Hand., XIII, 6, 1874, p. 11, pl. 1, figs. 17, 18.

30184. Cidaris californicus Clark.

Cotype.

Jurassic. Taylorsville, California.

Clark, Bull. No. 97, U. S. Geol. Surv., 1893, p. 36, pl. 6, figs. 1a-1c.

115400. Cidaris clevei Cotteau.

Holotype.

Miocene. Anguilla, West Indies.

Cotteau, Kongl. Svenska Vet-Akad. Hand., XIII, 6, 1874, p. 11, pl. 1, figs. 15, 16.

115415. Cidaris loveni Cotteau.

Holotype.

Eocene. St. Bartholomew, West Indies.

Cotteau, Kongl. Svenska Vet-Akad. Hand., XIII, 6, 1874, p. 10, pl. 1, figs. 11-14.

115399. Cidaris melitensis Wright.

Plesiotypes.

Miocene. Anguilla, West Indies.

Cotteau, Kongl. Svenska Vet-Akad. Hand., XIII, 6, 1874, pl. 1, figs. 1-10.

30183. Cidaris taylorensis Clark.

Cotype.

Jurassic. Taylorsville, California.

Clark, Bull. No. 97, U. S. Geol. Surv., 1893, p. 35, pl. 6, figs. 2 a, 2b-

8381. Cidaris texanus, Clark.

Holotype.

Washita (Lower Cret.). Bexar County, Texas.

Clark, Johns Hopkins Univ. Circ. No. 87, 1891, p. 75; Bull. No. 97, U. S. Geol. Surv., 1893, p. 36, pl. 7, figs. 1a-1e.

30077. Cidaroblastus globosus (Troost).

Holotype.

Mississippian. Bedford County, Tennessee.

Hambach, Trans. St. Louis Acad. Sci., XIII, 1900, p. 30, pl. 3, fig. 4.

33080. Cidaroblastus granulatus (Roemer).

Cotypes.

Mississippian. Bedford County, Tennessee.

Hambach, Trans. St. Louis Acad. Sci., XIII, 1903, p. 29, pl. 3, figs. 2, 3 (on plate as C. granularis).

See Granatocrinus cidariformis.

291. Cinulia (Oligoptycha) concinna (Hall and Meek).

Plesiotypes.

Fox Hills (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 284, pl. 31, figs. 6 bis, a-b.

See Avalana subglobosa.

11409. Cladocora recrescens Lonsdale.

Plesiotype.

Upper Oligocene. Jacksonboro, Georgia.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 138, pl. 15, figs. 2, 3.

45744. Clathrospira conica Ulrich and Scofield.

Cotypes.

Black River (Ord.). Chatfield, and Goodhue County, Min-

45746. nesota.

Trenton (Ord.). Near Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final. Rept., III, Pt. II, 1897, p. 1008, pl. 70, figs. 1-4.

45747. Clathrospira convexa Ulrich and Scofield. Holotype. Stones River (Ord.). Calhoun County, Illinois.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1007, pl. 69, fig. 51.

45748. Clathrospira subconica (Hall). Plesiotypes. 46051. Stones River (Ord.). Beloit, Wisconsin; Lebanon, Tennessee.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1006, pl. 69, figs. 47, 48; pl. 70, figs. 5, 6.

107142. Clathurella amicta Guppy. Holotype. Oligocene. Vendryes, Jamaica, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 305, pl. 27, fig. 12.

Oligocene Vendryes, Jamaica, West Indies.

Dall, Proc. U. S. Nat. Mus., XIX, 1896, p. 306, pl. 27, fig. 1.

113381. Clava caloosaënsis Dall. Cotypes.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 291, pl. 14, fig. 3a.

Oligocene. Alum Bluff, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III. Pt. II, 1892, p. 290, pl. 22, fig. 8.

35134. Clavulites howardensis Girty. Cotypes.
Burlingame (Upper Carb.). Howard, Kansas.
Girty, Proc. U. S. Nat. Mus., XXVII, 1904, p. 732, pl. 47, figs. 4–11.

Cleidophorus. See Clidophorus.

Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, pl. 37, fig. 12; Pt. VI, 1903, p. 1236.

Tertiary. Savaneta, Trinidad, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 327, pl. 30, fig. 8.

38118. Cleonus foersteri Scudder. Holotype. Florissant (Oligocene). Florissant, Colorado. Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 97, pl. 11, fig. 4.

46110. Clidophorus consuetus Ulrich. Holotype. Trenton (Ord.). Wykoff, Minnesota.

Ulrich, Nineteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn., 1892, p. 223, fig. 9; Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 606, pl. 37, figs. 32, 33.

46111. Clidophorus ellipticus Ulrich.

Utica (Ord.). Covington, Kentucky.

Ulrich Journ Cincinnati See Nat Hist II 1870 P. 25 pl. 7.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 25, pl. 7, fig. 22.

46223. Clidophorus major Ulrich. Holotype.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 25, pl. 7, fig. 23.

=Lyrodesma major.

21703. Clidophorus occidentalis (Geinitz). Plesiotype.
Permian. Godwin Creek, Baylor County, Texas.

White, Bull. No. 77, U. S. Geol. Surv., 1891, p. 27, pl. 4, fig. 3.

7731. Clinopistha radiata (Hall). Plesiotypes. Upper Carboniferous. Illinois.

White, Thirteenth Ann. Rept. Geol. Surv. Ind., 1884, p. 147, pl. 31, figs. 6, 7.

46112. Clionychia erecta (Hall). Plesiotype. Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 496, pl. 35, figs. 17, 18.

46113. Clionychia excavata Ulrich. Holotype. Richmond (Ord.). Richmond, Indiana.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 651, pl. 51, figs. 4, 5.

46114 Clionychia lamellosa (Hall). Plesiotypes.
to Stones River (Ord.). Mineral Point and Beloit, Wiscon46116. sin; Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 494, pl. 35, figs. 10-14.

46117. Clionychia rhomboidea Ulrich. Plastotype. Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Amer. Geol., X, 1892, p. 97, pl. 7, figs. 1, 2; Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 496, pl. 35, figs. 19, 20.

46118. Clionychia subundata Ulrich. Holotype.
Trenton (Ord.). Covington, Kentucky.
Ulrich, Geol. Surv. Ohio, VII, 1893, p. 651, text fig.

46119. Clionychia undata (Emmons). Plesiotype.
Trenton (Ord.). Near Wykoff, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 497, pl. 35, figs. 21, 22.

35197. Cliothyris crassicardinalis (White). Plesiotype.
Madison (Miss.). North of Owl Creek, Yellowstone
National Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 567, pl. 71, fig. 8a.

35198. Cliothyris crassicardinalis nana Girty. Cotypes.
Madison (Miss.). Crowfoot Ridge, Yellowstone National
Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 569, pl. 71, fig. 9a.

35159. Clisiophyllum teres Girty. Cotypes.

Madison (Miss.). Three Fork Peak, Gallatin Range,
Yellowstone National Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 614, pl. 67, figs. 2a, 2b, 2c, 2d.

20104. Clisocolus cordatus Whiteaves. Plesiotypes.
Nanaimo (Cret.). Sucia Island, Gulf of Georgia.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 41, pl. 6, figs. 8, 9.

20092. Clisocolus dubius (Gabb). Plesiotypes.
Nanaimo (Cret.). Sucia Island, Gulf of Georgia.
White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 41, pl. 6, figs. 5-7.

260. Closteriscus tenuilineatus (Hall and Meek). Plesiotypes.
Fort Pierre (Cret.). Cheyenne River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 308, pl. 19, figs. 10a, 10b, and 9c.

12522. Clydonites lævidorsatus (Hauer). Plesiotypes.
Triassic. Buena Vista Canyon, north fork of Humboldt
Range, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 109, pl. 10, fig. 7a.

115390. Clypeaster antillarum Cotteau. Holotype. Miocene. Porto Rico, West Indies.

Cotteau, Kongl. Svenska Vet-Akad. Hand., XIII, 6, 1874, p. 15, pl. 2, figs. 1-3.

115375. Clypeaster concavus Cotteau. Holotype. Miocene. Anguilla, West Indies.

Cotteau, Kongl. Svenska Vet-Akad. Hand., XIII, 6, 1874, p. 16, pl. 2, figs. 4-8.

112657. Cochliolepis striata Stimpson. Plesiotypes.
Miocene. Duplin County, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 419, pl. 23, figs. 16, 17.

Codakia (Jagonia) chipolana Dall. Holotype. Chipola (Oligocene). Alum Bluff, Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1349, pl. 52, fig. 9.

114688. Codakia (Jagonia) erosa Dall. Holotype. Chipola (Oligocene). Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1348, pl. 52, fig. 7.

Upper Miocene. Magnoliana Dall. Holoty
Upper Miocene. Magnolia, Duplin County, North Carol
Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI,
p. 1349, pl. 52. fig. 17.

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135716. Codakia (Jagonia) pertenera Dall. Holotype. Bowden (Oligocene). Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1347, pl. 51, fig. 4.

135713. Codakia spinulosa Dall. Holotype. Bowden (Oligocene). Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1346, pl. 52, fig. 19.

135720. Codakia (Jagonia) vendryesi Dall. Holotype. Bowden (Oligocene). Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1348, pl. 52, fig. 4.

39922. Codonocrinites gracilis Troost. Chirotype.
Mississippian. Huntsville, Alabama.

Troost, Proc. Amer. Assoc. Adv. Sci. II, 1850, p. 60.

25505. Cælidia wyomingensis Scudder. Holotype.
Older Tertiary. Twin Creek, Wyoming.
Scudder, Thirteenth Ann. Rept. U. S. Geol. Surv. Terr., 1890,

p. 313, pl. 4, fig: 8.

45749. Cœlocaulus neglectus Ulrich and Scofield. Holotype. Trenton (Ord.). Near Cannon Falls, Minnesota. Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1020, pl. 82, figs. 29-31.

45750. Cœlocaulus oehlerti Ulrich. Cotypes.
Trenton (Ord.). Jo Daviess County, Illinois.
Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897. p. 1000, pl. 70 figs. 61-63.

44003. Cœloconus granosus Ulrich. Cotype. Chester (Miss.). Anna, Union County, Illinois. Ulrich, Geol. Surv. III., VIII., 1800, p. 665, pl. 72, figs. 3a, 3b.

43335. Cœloconus rhombicus Ulrich. Cotypes and figured sections. St. Louis (Miss.). Fountain Creek, Monroe County, Illinois.

Ulrich, Geol. Surv. III., VIII, 1800, p. 664, pl. 72, figs. 4-4c.

35001. Cœlocystis subglobosus (Hall). Plesiotypes 35155. Niagaran (Sil.). Chicago, Illinois. Schuchert, Amer. Geol., XXXII, 10/3, p. 235; Smithsonian Misc. Coll., Quart., XLVII, 1004, pp. 247, 248, text figs. 36, 37.

18326. Coleoloides typicalis Walcott. Cotypes.
Lower Cambrian. Conception Ray. Newfoundland.

. . .

Walcott, Proc. U. S. Nat. Miss., XII. 1884, p. 37; Tenth Ann. Rept. U. S. Geol. Surv., 1884, p. 524, pl. 74, figs. 6, 6a.

14194. Coleolus lævis Walcott. Cotypes. White Pine Shale (Lower Carb.). Diamond Peak, Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 199, pl. 6, fig. 9.

17373. Coleoprion minuta Walcott. Cotypes.

Upper Pogonip (Ord.). Lone Mountain and Pogonip
Ridge, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 85, pl. 11, figs. 17, 17a; pl. 12, fig. 21.

113001. Collonia chipolana Dall. Holotype. Oligocene. Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 387.

113002. Collonia claibornensis Dall. Holotype. Claibornian (Eocene). Claiborne, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 388, pl. 22, fig. 26.

112996. Collonia elegantula Dall. Cotypes.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 386, pl. 19, figs. 3, 4.

113000. Collonia radiata Dall.

Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 387, pl. 19, figs. 6, 7, 8.

46120. Colpomya constricta Ulrich. Cotypes.

Trenton (Ord.). Frankfort, Kentucky.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 659, pl. 52, figs. 17-19;
 Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 523, fig. 41.

46121. Colpomya demissa Ulrich. Holotype.

Black River (Ord.). Chatfield, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 524, pl. 36, figs. 21, 22.

115514. Columbella ambigua Guppy. Holotype.

Miocene. Jamaica, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 288,

pl. 16, fig. 8.

=Strombina ambigua.

163749. Columbella cosmia Dall. Holotype.

Pliocene. Sheil Creek, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 58, fig. 2.

115515. Columbella gradata Guppy. Holotype-115516. Miocene. Cumana, Venezuela, and Jamaica, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 288, pl. 16, fig. 10.

Strombina gradata.

162558. Columbella (Anachis) minima Arnold. Holotype. Pleistocene. San Pedro, California.

Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 237, pl. 9, fig. 8.

Pliocene. Matura, Trinidad, British West Indies.

Guppy, Geol. Mag., London, Dec. II, I, 1874, p. 411, pl. 18, fig. 20.

Alsopus stearnsii.

113250. Columbella (Anachis) styliola Dall. Holotype. Miocene. Cape Fear River, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 242, pl. 13, fig. 11.

1115. Columna teres (Meek and Hayden). Holotype.

Laramie (Cret.). Three miles below Fort Union, North
Dakota.

Meck, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 555, pl. 44, figs. 11a, 11b.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 454, pl. 25, fig. 15.

See Bulimus? teres.

2113. Columna vermicula (Meek and Hayden). Holotype and paratypes.

Laramie (Cret.). Three miles below Fort Union, North Dakota.

Meck, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 556, pl. 44, figs. 12-12b.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 484, pl. 25, fig. 16.

See Bulinus? vermiculus.

Columna vermicula contraria Meek. Holotype. Laranne (Cret. Near Fort Union, North Dakota.

Mock, Roys U. S. God. Surv. Terr., IX. 1876, p. 557.

(144)): Columnaria halli Nicholson. Plesiotype.
Shores River Chil. Two miles southwest of Columbia,
Tennessee

Here, and Ulrich, U.S. Gerl, Sim., Frinces, they illustration where the  $\mathcal{L}^{\ast}$ 

West Columnaria thomis Hall Holotype.

Loughts and formation not given. Probably Richmond (Onl.), near El Part Tricks.

Mall Smers & Regel U.S. Mersear Francis Smert. I Fr. 11 (1857). A 175 ph. N. Kon (a. 18)—Warrett Francischingen Tennersellis. See J. Brow III. (2013 ph. 2023).

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14552. Combophyllum multiradiatum Meek. Holotype. Base of Upper Devonian. Onion River, Mackenzie River Basin, Canada.

Meek, Trans. Chicago Acad. Sci., I, 1868, p. 84, pl. 11, figs. 4, 4a.

20118. Cominella lecontei White. Cotypes. Chico (Cret.). Near Pences Ranch, Butte County, California.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 22, pl. 4, figs. 4, 5.

40759. Compsocrinus harrisi (Miller). Plesiotype. Richmond (Ord.). Waynesville, Ohio.

Miller, N. A. Geol. and Pal., 1889, p. 234, fig. 272.—Wachsmuth and Springer, N. A. Crinoidea Camerata, Mem. Mus. Comp. Zoöl., XXI, 1897, p. 517, pl. 21, figs. 8a, 8b.

See Glyptocrinus harrisi.

40760. Compsocrinus miamiensis (Miller). Holotype. Richmond (Ord.). Waynesville, Ohio.

Wachsmuth and Springer, N. A. Crinoidea Camerata, Mem. Mus. Comp. Zoöl., XXI, 1897, p. 518, pl. 21, fig. 7a.

See Glyptocrinus miamiensis.

154354. Congeria lamellata Dall. Cotypes. Pliocene. Shell Creek, De Soto County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 809, pl. 35, figs. 13, 14, 15.

25531. Coniatus refractus Scudder. Holotype.
Older Tertiary. White River, Utah.

Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 79, pl. 10, fig. 4.

13915. Conocardium nevadensis Walcott. Cotypes.
Middle Devonian. Eureka District, Nevada.
Walcott, Mon, VIII, U. S. Geol. Surv. 1884, p. 177, pl. 16, figs.

35157. Conocardium pulchellum White and Whitfield (?).

Plesiotype.

Madison (Miss.). Crowfoot Ridge, Gallatin Range, Yel-

lowstone Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 571, pl. 66, fig. 14a.

8539. Conocardium semiplenum White. Holotype.
Lower Carboniferous. Below Ophir City, Utah.
White, Rept. U. S. Geogr. Surv. W. 100th. Merid., IV. Pt. I,1876,

p. 94. [Named at end of description.]

4, 4a.

24562. Conocephalites (Pterocephalus) laticeps Hall and White

Upper Cambrian. West side of Pogonip Mountain, Pine District, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, 1 1877, p. 221, pl. 2, figs. 4-7.

15442. Conocephalites subcoronatus Hall and Whitfield. Cotypes. Lower Cambrian. Ute Peak, Wahsatch Range, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. 11, 1877, p. 327, pl. 2, fig. 1.

= Ptychoparia subcoronata.

7861. Conocoryphe (Ptychoparia) gallatinensis Meek. Cotypes.
 7862. Middle Cambrian. Above Gallatin City, east side of Gallatin River, Montana.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 (1873), p. 485.

= Ptychoparia oweni.

8577. Conocoryphe (Ptychoparia) kingii Meek. Plesiotypes. 14585. Middle Cambrian. Antelope Springs, House Range, 15439. Utah.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 20, pl. 1, fig. 4.—White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 40, pl. 2, figs. 2a-2c.—Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 193, pl. 27, figs. 4, 4a.

18431. Conocoryphe reticulata Walcott. Holotype.

Lower Cambrian. Near Salem, Washington County, New York.

Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 649, pl. 95, figs. 6, 6a.

17453. Conocoryphe trilineata (Emmons). Plesiotype.

Lower Cambrian. Washington County, New York.

Walcott, Amer. Journ. Sci., (3), XXXIV, 1887, p. 197, pl. 1, figs.
7-7b.—Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 647, pl.
95, figs. 5a-5e.

=Atops trilineatus.

39023. Conocrinites leæ Troost. Chirotypes.

Mississippian. White Creek Spring, Davidson County,
Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 60.

Oligocene. Ballast Point, Tampa, Florida.

Pall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 94, pl. 4, fig. 2.

18443. Conotreta rusti Walcott. Cotypes.

Trenton Ord. Trenton Falls, New York.

Walcott, Proc. U. S. Nat. Mus., XII, 1800, p. 365, figs. 1-4, on p. 300.

45751. Conradella bellula Ulrich. Holotype. Lorraine Ord. Covington. Kentucky.

Ulrich, Geol and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II. (Sep. p. etc., pl. etc. figs. 23-26.

45752. Conradella dyeri (Hall). Plesiotypes. Richmond (Ord.). Butler County, Ohio.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 909, pl. 67, figs. 30-33.

45753. Conradella dyeri cellulosa Ulrich and Scofield. Holotype. Trenton (Ord.). Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 910, pl. 67, figs. 27-29.

45754. Conradella elegans (Miller).

Plesiotypes.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 911, pl. 67, figs. 12-15.

45755. Conradella fimbriata Ulrich and Scofield. Cotypes. Stones River (Ord.). Minneapolis, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., 1II, Pt. II, 1897, p. 907, pl. 62, fig. 66; pl. 67, figs. 7-9.

45756. Conradella grandis Ulrich.

Cotypes.

Stones River (Ord.). Lebanon, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 908, pl. 62, fig. 67; pl. 67, figs. 16-18.

45757. Conradella imbricata (Meek and Worthen). Plesiotype.
Trenton (Ord.). Alexander County, Illinois.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 911, pl. 67, fig. 11.

45758. Conradella obliqua Ulrich and Scofield. Cotypes.

45759. Black River (Ord.). Cannon Falls and St. Paul, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 906, pl. 67, figs. 1-6.

- 45760. Conradella triangularis Ulrich and Scofield. Cotypes.
- 45761. Stones River (Ord.). Minneapolis, Minnesota; Dixon,
- 45762. Illinois; Beloit, Wisconsin.

Ulrich and Scofield, Geol. and Nat. Hist Surv. Minn., Final Rept., III, Pt. II, 1897, p. 908, pl. 67, figs. 19-22.

44068. Constellaria fischeri Ulrich. Holotype and figured section.

Trenton (Ord.). Near Winchester, Kentucky. (Mount Sterling, Kentucky, in error).

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 270, pl. 14, figs. 6-6c.

43808. Constellaria florida Ulrich. Cotypes and figured section Lorraine (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 267, 1 figs. 2-2f.

- BULLETIN 53, UNITED STATES NATIONAL MUSEUM.
- Constellaria florida emaciata Ulrich and Bassler. Cotypes. Trenton (Ord.). Columbia, Tennessee.

Ulrich and Bassler, in Hayes and Ulrich, U. S. Geol. Surv., Folio 95, 1903, illustration sheet, fig. 30; Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 37.

43645. Constellaria florida plana Ulrich. Holotype. Lorraine (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 269, pl. 14, fig. 4.

43644. Constellaria florida prominens Ulrich. Holotype. Utica (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 269, pl. 14, fig. 3.

43643. Constellaria limitaris (Ulrich). Plesiotypes and figured sections.

Richmond (Ord.). Blanchester, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 269, pl. 14, figs. 5, 5a.

43747. Constellaria parva Ulrich. Figured sections of holotype. Richmond (Ord.). Wilmington, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 424, pl. 34, figs. 1a, 1b.

Cotypes. Trenton (Ord.). Columbia, Tennessee.

Ulrich and Bassler in Hayes and Ulrich, U. S. Geol. Surv., Folio 95, 1903, illustration sheet, fig. 31; Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 37.

Constellaria varia Ulrich. Cotypes and figured sections. Trenton (Ord.). One and a half miles south of Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 311, pl. 21, figs. 1-7.

Cotypes. Upper Cambrian. Pilot Knob, Wisconsin.

Walcott, Proc. U. S. Nat. Mus., XIII, 1890, p. 270, pl. 20, fig. 10.

Conularia crustula White.

Upper Carboniferous. Near Kansas City, Missouri.

White, Tweltth Ann. Rept. U. S. Geel. Surv. Terr., 1878 (1883).

Pt. I. p. 170, pl. 42, fig. 4a.

Leger. Communication White. Plesiotypes. Upper Carboniferous. Near Taos, New Mexico.

White, Rept. U. S. Geogr. Surv., W. 100th Merid., III, Suppl., 1881, p. 88, pl. 3, figs. 44, 4b.

3668. Conularia inornata Dana.

Holotype.

Carboniferous. Glendon on the Hunter, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 709, Atlas, pl. 10, fig. 8.

3669. Conularia levigata Morris.

Plesiotypes.

Carboniferous. Harpers Hill on the Hunter, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 710, Atlas, pl. 10, figs. 9, 9a.

14425. Conularia missouriensis. (Swallow). Plesiotypes.

Lower Carboniferous. Mokomoke Ridge, White Pine District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 264, pl. 23, fig. 4.

113985. Conus chipolanus Dall.

Cotypes.

Chipola (Oligocene). Chipola River, Florida.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 42; Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1903, pl. 60, fig. 23.

115594. Conus consobrinus Sowerby.

Plesiotypes.

Oligocene. Jamaica, British West Indies.

Guppy, Geol. Mag., London, Dec. II, I, 1874, p. 409, pl. 17, fig. 3.

64405. Conus cruzianus Dall.

Holotype.

Pliocene? Island Santa Cruz, West Indies.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 25, pl. 5, fig. 12.

113920. Conus demiurgus Dall.

Cotypes.

113922. Chipola (Oligocene). Calhoun County, Florida.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 43; Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1903, pl. 60, fig. 22.

115589. Conus gracilissimus Guppy.

Holotype.

Miocene. Jamaica, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 288, pl. 16, fig. 4.

115587. Conus granozonatus Guppy.

Holotype.

Miocene. Jamaica, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 287, pl. 16, fig. 5.

115588. Conus interstinctus Guppy.

Holotype.

Miocene. Jamaica, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 100 pl. 16, fig. 3.

113980. Conus isomitratus Dall.

Cotypes.

Chipola (Oligocene). Chipola River, Florida.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 43; Trans. Wagner Free-Inst. Sci. Phila., III, Pt. IV, 1903, pl. 60, fig. 26.

113024. Conus isomitratus sulculus Dall.

Cotypes.

Chipola (Oligocene). Chipola River, Florida.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 43.

:: Conus sulculus.

4780. Conus okhotensis Dall.

Holotype.

Miocene. Penjinsk Gulf, Siberia.

Dall, Proc. U. S. Nat. Mus., XVI, 1893, p. 475, pl. 56, fig. 4.

112080. Conus planiceps Heilprin.

Cotypes.

Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 25, pl. 11, figs. 5, 5a; Pt. II, 1892, p. 219.

115503. Conus prototypus Guppy.

Holotype.

Miocene. Saranetta, Trinidad, British West Indies.

Guppy, Geol. Mag., London, Dec. II, I, 1874, p. 409, pl. 18, fig. 1; pl. 17, fig. 9.

115585. Conus recognitus Guppy.

Cotypes.

Miocene. Jamaica.

Guppy, Proc. Sci. Assoc., Trinidad, 1867, p. 171; Geol. Mag., London, Dec. II, I, 1874, p. 440.

113024. Conus sulculus Dall.

Cotypes.

Chipola (Oligocene). Chipola River, Florida.

Pall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 60, fig. 27.

See Conus isomitratus sulculus.

97389. Conus tryoni Heilprin.

Plesiotypes.

Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

Heilprin, Trans. Wagner Free Inst. Sci. Phila., I. 1887, p. 133, pl. 10b, fig. 75.

Conus adversarius.

155714 Cooperella carpenteri Dall.

Holotype.

Miocene Petersburg, Virginia.

Dull, Trans Wagner Free Inst. Sci. Phila., III. Pt. V. 1900, p. 193, pt. 14, fig. 8

12008. Coralliochama orcutti White.

Cotypes

Chico Cret. Tedes Santos Ray and Wallala, California.

White, Bull. No. 22, U.S. Geol. Surv., 1885, p. 16, pls. 1-4.

115804. Coralliophaga bryani Clark.

Holotype.

Eocene. Pamunkey Neck, Maryland.

Clark, Johns Hopkins Univ. Circ. No. 15, 1895, p. 5; Bull. No. 141, U. S. Geol. Surv., 1896, p. 73, pl. 15, figs. 2a, 2b.

Coralliophaga elegans Dall=C. elegantula.

155720. Coralliophaga elegantula Dall.

Holotype.

Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, pl. 25, figs. 2, 2a, as C. elegans; Pt. VI, 1903, p. 1499.

112186. Coralliophila lepidota Dall.

Holotype.

Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 156, pl. 9, fig. 3.

112069. Coralliophila magna Dall.

Cotypes.

Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 155, pl. 11, figs. 11, 12.

11557. Corbicula augheyi White.

Cotypes.

Laramie (Cret.). Valley of South Platte River, Colorado.

White, Proc. U. S. Nat. Mus., V, 1882, p. 95, pl. 4, figs. 4-6; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 438, pl. 21, figs. 4-6.

7834. Corbicula (Veloritina) bannisteri Meek. Holotype Laramie (Cret.). Black Butte Station, Wyoming.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 (1873), p. 513.

=Corbicula occidentalis.

11556. Corbicula berthoudi White.

Cotypes.

Laramie (Cret.). Valley of South Platte River, Colorado.

White, Proc. U. S. Nat. Mus., V, 1882, p. 94, pl. 4, figs. 1-3; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 438, pl. 21, figs. 1-3.

9024. Corbicula cardiniæformis White.

Holotype.

Laramie (Cret.). Crow Creek, Northern Colorado.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883), Pt. I., p. 73, pl. 25, figs. 5a, 5b.

9024. Corbicula (Leptesthes) cardiniæformis White. Holotype 12477. and plesiotyp

Laramie (Cret.). Crow Creek and Fremonts Orcha Colorado.

White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 437, pl. 6, figs. 10, 11, 12-15.

12477. Corbicula (Leptesthes) cardiniæformis White.

Plesiotype

Laramie (Cret.). Valley of South Platte, Colorado.

White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 437, pl. 2: figs. 12-15.

9023. Corbicula cleburni White.

Cotype

Laramie (Cret.). Crow Creek, Northern Colorado.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883)
Pt. I, p. 73, pl. 23, figs. 1a-1c; Third Ann. Rept. U. S. Geo Surv., 1883, p. 437, pl. 20, figs. 7-9.

7728. Corbicula? crassatelliformis Meek.

Cotype

Laramie (Cret.). Hallville Coal Mines, Wyoming.

Meek, Fourth Ann. Rept. U. S. Geol. Surv. Terr., 1871, p. 315-316.

=Corbula subtrigonalis.

2133. Corbicula cytheriformis Meek and Hayden. Holoty

2135.

and paratype Laramie (Cret.). Bad Lands of Judith River, and ne

Fort Benton, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 520, pl. 4
figs. 5a-5e.—White, Third Ann. Rept. U. S. Geol. Surv., 18
p. 437, pl. 22, figs. 1, 2.

8117. Corbicula cytheriformis Meek and Hayden. Plesiotyp 9673. Montana (Cret.). Point of Rocks Station, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (188)
Pt. I, p. 74, pl. 21, figs. 4a-4d; Third Ann. Rept. U. S. Ge
Surv., 1883, p. 437, pl. 22, figs. 3-6.

18644. Corbicula (Veloritina) cytheriformis Meek and Hayde 18646. Plesiotyp

Montana and Laramie (Cret.). Point of Rocks and Bla Butte Stations, Wyoming.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 (187 p. 511.

7621. Corbicula (Veloritina) durkeei (Meek). Cotyp
Bear River (Cret.). Sulphur Creek, Bear River, Wy
ming.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 1 pl. 16, figs. 6-6d.—White, Third Ann. Rept. U. S. Geol. Sur 1883, p. 437, pl. 8, figs. 10, 11.

See Cyrena (Corbicula) durkeei.

8148. Corbicula durkeei (Meek). Plesiotyi

8166. Bear River (Cret.). Mouth of Sulphur Creek and ser 7621. miles north of Evanston, Wyoming.

White, Bull. No. 128, U. S. Geol. Surv., 189

See Cyrena (Corbicula) durk

8148. Corbicula (Veloritina) durkeei (Meek). Plesiotypes. 8166. Bear River (Cret.). Mouth of Sulphur Creek and near Evanston, Wyoming.

White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 437, pl. 8, figs. 8, 9.

7742. Corbicula? fracta Meek. Cotypes.

Laramie (Cret.). Hallville Coal Mines, Wyoming.

Meek, Fourth Ann. Rept. U. S. Geol. Surv. Terr., 1871, p. 314.

8104. Corbicula (Leptesthes) fracta Meek. Plesiotypes.

Laramie (Cret.). Black Butte Station, Wyoming.

White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 439, pl. 20, figs. 2-6.

7838. Corbicula? fracta crassiuscula Meek. Plesiotypes.
Laramie (Cret.). Black Butte Station, Wyoming.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 (1873),
p. 512.

7822. Corbicula (Veloritina) inflexa Meek. Cotypes.
Colorado (Cret.). Near Missouri River, below Gallatin
City, Montana.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 (1873), p. 493.

=Cyrena inflexa.

8124. Corbicula (Leptesthes) macropistha White. Cotypes. 12475. Laramie (Cret.). Crow and Bijou Creeks, northern Colorado.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883), Pt. I, p. 78, pl. 23, figs. 4a-4f; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 437, pl. 21, figs. 11-14.

2131. Corbicula nebrascensis Meek and Hayden. Holotype. Laramie (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 522, pl. 43, figs. 2a, 2b.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 437, pl. 20, figs. 12, 13.

See Cyrena intermedea.

7898. Corbicula? nucalis Meek. Holotype and paratype. Mentor (Cret.). Twelve miles southwest of Salina, Kansas.

Meek, Fourth Ann. Rept. U. S. Geol. Surv. Terr., 1871, p. 304; Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 163, pl. 2, figs. 5a-c.

9025. Corbicula obesa White. Cotypes.

Laramie (Cret.). Crow and Bijou Creeks, northern Colorado.

relith Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883), pl. 23, figs. 3a-3e; Third Ann. Rept. U. S. Geol. pl. 23, figs. 7-11.

2134. Corbicula occidentalis (Meek and Hayden.) Holotype and paratype.

Laramie Cret. Bad Lands of Judith River, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 521, pl. 40, figs. 6a, 6b.

See Cyrena occidentalis.

7834. Corbicula occidentalis (Meek and Hayden). Plesiotypes. 8112. Laramie (Cret.). Black Butte Station, Wyoming, and Yampa Valley, northwestern Colorado.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883), Pt. I, p. 75, pl. 21, fig. 3a; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 437, pl. 23, figs. 1-6.

See Corbicula bannisteri 7834.

7841. Corbicula? (Leptesthes) planumbona Meek. Cotypes.

Laramie (Cret.). Two hundred miles east of Denver,
Colorado.

Meek, Bull, U. S. Geol, and Geogr. Surv. Terr. (2), I, No. 1, 1875, p. 43-

7841. Corbicula Leptesthes planumbona Meek. Cotypes and \$126. Plesiotypes.

Laramie (Cret.). Two hundred miles east of Denver on Kansas Pacific Railroad, Crow Creek, northern Colorado.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terrs., 1878 (1883).
Pt. I. p. 77, pl. 21; figs. 22-d; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 437, pl. 22, figs. 7-9.

12508. Corbicula powelli White.

Cotypes.

Eocene.

White, Powell's Rept. Geol. Uinta Mountains, 1876, p. 127.

[The locality given is erroneous and the true location is unknown. See Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1877 (1879), pp. 191, 192). T. W. Stanton.]

20106. Corbicula pugetensis White.

Cotypes.

Puget - Cret .? . Carbonado, Washington.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 60, pl. 11, fig. 8.

441. Corbicula subelliptica Meek and Hayden Holotype.

Laramie Cret. Cherry Creek. South Dakota.

Meek, Rept. U. S. Geol, Surv. Terr., IX, 1876, p. 523, pl. 43, fig. ca.

See Tellina subelliptica.

8123. Corbicula subelliptica Meek and Hayden Plesiotypes.

White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 437, pl. 26, figs. 10, 11.

12473. Corbicula (Leptesthes) subelliptica (Meek and Hayden).
Plesiotypes.

Laramie (Cret.). Bijou Creek, Colorado.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 523, pl. 43, figs. 9b, 9c.

2132. Corbicula subelliptica moreauensis (Meek and Hayden).

Holotype and paratypes.

Laramie (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 524, pl. 43, figs. 1a, 1b, 2c.

See Cyrena moreauensis.

7900. Corbicula? subtrigonalis Meek. Holotype.

Mentor (Cret.). Twelve miles southwest of Salina,

Kansas.

Meek, Fourth Ann. Rept. U. S. Geol. Surv. Terr., 1871, p. 305; Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 164, pl. 2, fig. 6.

12468. Corbicula umbonella Meek. Plesiotypes.

Laramie (Cret.). Fifteen miles north of Orchard Station, Colorado.

White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 438, pl. 21, figs. 7-10.

20105. Corbicula willisi White. Cotypes.

Puget (Cret.?). Carbonado, Wilkeson, and Green River Valley, Washington.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 59, pl. 11, figs. 3-7.

154523. Corbula (Aloidis) caloosæ Dall. Holotype. 154525. Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 853, pl. 36, fig. 16.

494. Corbula (Potamomya?) concentrica Meek. Cotypes.

Bear River (Cret.). Bear River, near mouth of Sulphur

Creek, Wyoming.

Meek, Proc. Acad. Nat. Sci. Phila., for 1860, p. 313.

=Corbula (Anisorhynchus) pyriformis.

299. Corbula crassimarginata (Meek and Hayden). Holotype. Fox Hills (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 244, pl. 17, figs. 14a-14c.

Plesiotype.

115590. Corbula elevata Conrad.

Miocene. Shiloh, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol, Surv., 1894, p. 86, pl. 15, figs. 16-19. 495. Corbula (Potamomya?) engelmanni Meek. Holotype.
Bear River (Cret.). Bear River, near Sulphur Creek,
Wyoming.

Meek, Proc. Acad. Nat. Sci. Phila., for 1860, p. 313.

405. Corbula (Anisorhynchus?) engelmanni Meek. Holotype. Cretaceous. Bear River, mouth of Sulphur Creek, Wyoming.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 174, pl. 17, fig. 1a.

23110. Corbula engelmanni (Meek). Plesiotypes.
Bear River (Cret.). Near Waterfall, Wyoming.

White, Bull. No. 128, U. S. Geol. Surv., 1895, p. 40, pl. 4, figs. 10, 11.

114701. Corbula engonata burnsii Dall. Cotypes.
Oligocene. Calhoun County, Florida.

Dall, Trans, Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 817.

23062. Corbula filosa Stanton. Cotypes.

Knoxville (Lower Cret.). Near Stephenson, Tehama
County, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 62, pl. 11, figs. 1, 2.

115843. Corbula (fossata var.?) extenuata Dall. • Holotype. Eccene. Orangeburg District, South Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 844, pl. 36, fig. 6.

355. Corbula? gregaria Meek and Hayden. Holotype and paratypes.

Montana (Cret.). Vellowstone River, near Miles City, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 84. Corbulamella gregaria.

107000. Corbula (Aloidis heterogenea Guppy ms.) Dall. Holotype. Oligocene. Jamaica.

Dull, Trans. Wagner Free Inst. Sci. Phila., III. Pt. IV, 1898, p. 850-pl. 50, fig. 15.

23125. Corbula hicksii White. Plastotypes. Cretaceous. Five miles west of north of Fairburg. Nebraska

White Proc U.S. Nat. Mus., XVII, 1874, p. 134, pl. S. figs 6-8.

22000. Corbula kanabensis Stanton. Cotypes. Colorado Cret Upper Kanab Valley, Utah.

Stanton Bull No the U.S. Geol. Szrvi, 1893. p. 125. pl. 27. figs. 5. 5.

61730. Corbula (Anisothyris) ledæformis Dall. Holotype. Pliocene. Pebas, mouth of Ambigacu River, Brazil.

Dall, Amer. Journ. Conch., VII, 1871, p. 92, pl. 16, figs. 14, 15.

2168. Corbula mactriformis Meek and Hayden. Holotype and paratypes.

Laramie (Cret.). Fort Clark, North Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 117.—Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 528, pl. 43, figs: 7a.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 442, pl. 18, figs. 12-15.

107813. Corbula (Aloidis) milium Dall. Holotype. Eocene. Thomasville, Clarke County, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 845, pl. 36, fig. 19.

420. Corbula moreauensis Meek and Hayden. Holotype and paratype.

Fox Hills (Cret.). Moreau River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 83.

= Neæra moreauensis.

9899. Corbula nasuta Conrad.

Plesiotypes.

Tertiary. Western Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 161, pl. 19, fig. 4.

7830. Corbula nematophora Meek. Cot 7891. Colorado (Cret.). Near Cedar City, southern Utah.

Cotypes.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872, (1873), p. 496.—White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1877 (1879), p. 290, pl. 3, figs. 4a-d.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 124, pl. 27, figs. 3, 4.

8662. Corbula nematophora Meek. Plesiotypes.
Colorado (Cret.). Plateau near west crossing of North Fork
of Virgin River, Utah.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 188, pl. 17, figs. 7a-c.

23061. Corbula? persulcata Stanton. Holotype.

Knoxville (Lower Cret.). Three miles northwest of Paskenta, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 61, pl. 11, fig. 3.

2181. Corbula perundata Meek and Hayden. Paratypes.

Laramie (Cret.). Mouth of Judith River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, p. 116.—Meek, Rept. U. S. Geol. Surv. Terr., IX, 18 530, pl. 40, fig. 4c.

493. Corbula (Anisorhynchus) pyriformis Meek. Cotypes.

Bear River (Cret.). Bear River, near mouth of Sulphur

Creek, Wyoming.

Meek, Rept. Expl. Great Basin of Utah, Simpson, 1876, p. 361, pl. 5, figs. 9, 10.

493. Corbula (Potamomya?) pyriformis Meek. Cotypes.

Bear River (Cret.). Bear River, near mouth of Sulphur Creek, Wyoming.

Meek, Proc. Acad. Nat. Sci. Phila. for 1860, p. 312.

=Corbula (Anisorhynchus) pyriformis.

8149. Corbula pyriformis Meek. Plesiotypes.

Bear River (Cret.). Mouth of Sulphur Creek, Wyoming.

White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 441, pl. 8, figs. 12-16; Bull. No. 128, U. S. Geol. Surv., 1895, p. 38, pl. 4, figs. 5, 6, 7, 8, 9.

107388. Corbula (Bothrocorbula) radiatula Dall. Cotypes.
Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 851, pl. 36, figs. 1-3.

135909. Corbula (Bothrocorbula) radiatula tenella Dall. Cotypes. Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 851.

114621. Corbula (Cuneocorbula) sarda Dall. Holotype.
Oligocene. Alum Bluff, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 847, pl. 36, fig. 14.

135910. Corbula Cuneocorbula seminella Dall. Holotype. Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 4898, p. 848, pl. 36, fig. 11.

114862. Corbula Cuneocorbula sericea Dall. Holotype. Oligocene. Alum Bluff. Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 848, pl. 36, fig. 8.

154511. Corbula (Cuneocorbula sphenia Dall. Holotype. Oligocene. Chipola River, Calhoun County, Florida.

Dull, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 847, pl. 36, fig. 1c.

111501. Corbula subcontracta Whitfield.

Cotype.

Miocene. Shiloh, New Jersey.

Whitfield, Mon. XXIV. U. S. Gold. Surv., 1844, p. 88, pl. 15, figs. (1-44, -Pall, Trans. Wagner Free Inst. Sci. Phila., 111, Pt. IV, 1868, p. 854

= Corbula (Cuncocorbula subcontracta)

2183. Corbula subtrigonalis Meek and Hayden. Holotype and paratypes.

Laramie (Cret.). Mouth of Judith River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 116.—Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 529, pl. 40, figs, 3a, 3b.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 442, pl. 19, fig. 10.

See Corbicula crassatelliformis.

22901. Corbula subtrigonalis Meek and Hayden. Plesiotypes. Colorado (Cret.). Bear River City, Wyoming.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 123, pl. 27, figs. 7, 8.

8107. Corbula subtrigonalis Meek and Hayden. Plesiotypes. Laramie (Cret.). Crow Creek, northern Colorado.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883), Pt. I, p. 80, pl. 25, figs. 6a-c; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 442, pl. 19, figs. 11-13.

8109. Corbula subtrigonalis tropidophora (Meek). Cotypes.
Montana (Cret.). Near Point of Rocks Station, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883),
Pt. I, p. 80, pl. 25, fig. 6f; Third Ann. Rept. U. S. Geol.
Surv., 1883, p. 442, pl. 19, fig. 15.

See Corbula tropidophora.

114862a. Corbula (Cuneocorbula) swiftiana nuculeata Dall.

Holotype.

Oligocene. Alum Bluff, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 855, pl. 36, fig. 17.

154501. Corbula (Bothrocorbula) synarmostes Dall. Cotypes. Oligocene. Chipola River, Calhoun County, Florida.

Dall, Traus. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 850., pl. 36, figs. 12, 13.

8109. Corbula tropidophora Meek.

Montana (Cret.). Point of Rocks, Wyoming.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 (1873), p. 514.

=Corbula subtrigonalis tropidophora.

9060. Corbula undifera Meek.

Plesiotypes.

Cotypes.

Laramie (Cret.). Rock Springs Station, Wyoming.

Meck, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 (1873), p. 513. White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883), Pt. I, p. 80, pl. 29, figs. 4a-f; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 442, pl. 18, figs. 6-9.

9056. Corbula undifera subundifera White. Coty

Montana (Cret.). Point of Rocks, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (18
Pt. I. p. 81, pl. 29, figs. 5a-c; Third Ann. Rept. U. S. G. Surv., 1883, p. 442, pl. 18, figs. 10-11.

419. Corbula ventricosa Meek and Hayden. Holotype and paratypes.

Fox Hills (Cret.). Moreau River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 83.

115650. Corbula vieta Guppy. Holotype.

115651. Eocene. Manzanilla, Trinidad, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 580, pl. 26, fig. 8.

=Corbula disparilis.

115648. Corbula viminea Guppy.

Holotype.

Miocene. Jamaica, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 293, pl. 18, fig. 11.

135911. Corbula (Cuneocorbula) whitfieldi Dall. Holotype. Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 849, pl. 36, fig. 18.

154502. Corbula (Bothrocorbula) willcoxii Dall. Holotype.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Traus. Wagner Free Inst. Sci. Phila., III, Pt. 1V, 1898, p. 851, pl. 36, fig. 9.

355. Corbulamella gregaria (Meek and Hayden). Holotype and paratypes.

Montana (Cret.). Yellowstone River, near Miles City, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1857, p. 143.— Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 247, pl. 17, figs. 13a-d.

See Corbula? gregaria.

22307. Corbulomya tauschii White.

Cotypes.

Bear River (Cret.). Sage Station, Twin Creek Valley, Wyoming.

White, Bull. No. 128, U. S. Geol. Surv., 1895, p. 40, pl. 4, figs. 12, 13.

44090. Coscinium cribriforme Prout.

Plesiotypes.

Onondaga (Dev.). Falls of the Ohio.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 497, pl. 43, fig. 8.

43746. Coscinium latum Ulrich.

Cotypes.

Burlington (Miss.). Burlington, Iowa.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 497, pl. 76, figs. 7a, 7b.

15302. Coscinocyathus billingsi (Walcott). Holotype. Lower Cambrian. L'Anse au Loup, Labrador.

Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 600, pl. 51, figs. 2-2b.

See Archæocyathus billingsi.

25556. Cossonus rutus Scudder.

Holotype.

Older Tertiary. Roan Mountains, western Colorado.

Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 155, pl. 12, fig. 7.

35359. Cranæna subelliptica Hall and Clarke. Plesiotypes. Waverly (Miss.). Sciotoville, Ohio.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 299, pl. 1, figs. 6, 7.

35360. Cranæna subelliptica hardingensis Girty. Cotypes.

35361. Millsap (Miss.). Canyon and Garden Park, Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 299, pl. 1, figs. 8-10.

35163. Crania lævis Keyes. Plesiotype.

Madison (Miss.). Crowfoot Ridge, Yellowstone National Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 520, pl. 68, fig. 1a.

8053. Crassatella cimarronensis White.

Cotypes.

Fox Hills (Cret.). Cimarron, New Mexico.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1877 (1879), p. 287, pl. 5, figs. 3a-3c.

13339. Crassatella collina Conrad.

Holotype.

Miocene. Santa Inez Mountains, Santa Barbara County, California.

Conrad, Rept. Expl. and Survs. R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 193, pl. 6, figs. 1, 2.

553. Crassatella cuneata Gabb.

Cotype.

Ripley (Cret.). Eufaula, Alabama.

Gabb, Synop. of the Mollusca of the Cretaceous Formation, 1861, p. 112.

See Crassatella pteropsis.

2490. Crassatella declivis Heilprin.

Holotype.

Eocene. Aquia Creek, Virginia.

Heilprin, Proc. U. S. Nat. Mus., III, 1880, p. 151, fig. 9.

322. Crassatella (Pachythærus) evansi (Hall and Meek).

lesiotyr

Port Pierre (Cret.). Near Sage Creek, on Chey River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 117, pl figs. 6a-d.

22875. Crassatella excavata Stanton. Cotype Colorado (Cret.). Williams Creek, Huerfano Park, Colorado.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 96, pl. 21, fig

111598, Crassatella melina Conrad. Plesiotyp Miocene. Near Shiloh, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 60, pl. figs. 11-13.

553. Crassatella pteropsis Gabb. Cotyp Ripley (Cret.). Eufaula, Alabama.

Gabb, Journ. Acad. Nat. Sci. Phila., (2), IV, 1860, p. 395. = Crassatella cuneata.

NOSS. Crassatella shumardi Meek. Cotype Montana (Cret.). Popes Well, New Mexico.

Meek, Rept. Expl. Exped. Santa Fe to junction of Grand at Green Riv., Macomb, 1876, p. 127, pl. 2, figs. 7a-c.

12501. Crassatella subquadrata Whitfield. Holotyp Fort Pierre (Cret.). Cheyenne River, Black Hills, Sout Dakota.

Whitfield, Rept. Gool. and Resources Black Hills Dakota, 188 p. 412, pl. 11, fig. 12.

Namaimo Cret. 1. Sucia and Waldron Islands, Gulf (Georgia.

White, Sull. No. 51, U. S. Geol. Surv., 1889, p. 39, pl. 6, figs. 2-.

157827 Crassatella unioides Stanton. Cotype Lower Tejon Eccene . One mile southeast of Lowe Lake Lake County, California.

Station Seventeenth Ann. Rept. U.S. Geol. Surv., Pt. I, 189, pp. 140, pp. 55, figs. 1, 2

Crassatellina oblonga Meek. Holotype and paratype Mentin Cret. Twelve miles southwest of Salina, Kansa

Neek, Franth Ann. Rept. U. S. Geol. Surv. Terr., 1871, p. 30, new figs. A. S. Rept. U. S. Geol. Surv. Terr., 1X, 1871 p. 30, pl. 1 figs. p. 4.

197903 Crassmellines Crassinella acutes Pail. Holotype Physique Calmesalatoine Florida.

Tail, Trans. Wagner Free Inst. Sci. Phila. III, Pt. VI, 1905.
To late the Society of the Control of t

Rende Crassmellnes Crassinella Soudenessis Dall. Cotypes Rowner Organiere Rowner Jamaica.

Tail. Trum Vincer Free Inc. Sc. Phila. III. Pt. VI. 1903. In arts to S. Rey 2.3. 114713. Crassatellites (Scambula) chipolanus Dall. Holotype.
Chipola (Oligocene). McDonald's ranch, Chipola River,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1472, pl. 49, fig. 12.

139086. Crassatellites clarkensis Dall. Cotypes. Eocene. Wahtubbee, Clarke County, Mississippi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, pl. 36, figs. 20, 21, 24, 25; Pt. VI, 1903, p. 1470.

Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, pl. 39, figs. 9-12, as C. densus; Pt. VI, 1903, p. 1472.

114922. Crassatellites (Crassinella) duplinianus Dall. Cotypes.
Miocene. Natural Well, Duplin County, North Carolina.
Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903,

1630. Crassatellites (Crassinella) galvestonensis (Harris).
Plesiotype.

Miocene. Yorktown, Virginia.

p. 1478, pl. 50, figs. 5, 6.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1478, pl. 49, fig. 14.

107151. Crassatellites (Crassinella) guppyi Dall. Holotype.
Oligocene. Vendryes, Jamaica, West Indies.

Dall, Proc. U. S. Nat Mus., XIX, 1896, p. 326, pl. 30, fig. 5.

135733. Crassatellites (Scambula) jamaicensis Dall. Holotype. Bowden (Oligocene). Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1471, pl. 49, fig. 12.

6123. Crassatellites (Crassinella) lunulatus (Conrad). Plesiotype. Miocene. Natural Well, Duplin County, North Carolina.

Dan, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1477. pl. 49, fig. 15.

114829. Crassatellites (Scambula) melinus meridionalis Dall. Holotype.

Miocene. Alum Bluff, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III Pt. V, 1900, pl. 37. figs. 6, 13; Pt. VI, 1903, p. 1473.

107451. Crassatellites (Scambula) psychopterus (Dall). Holot Eocene. Walitubbee, Clarke County, Mississippi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 194, pl. 42, figs. 8, 9, as C. psychopterus; Pt. VI, 1903, p. 1470.

135852. Crassatellites (Crassinella) tanicus Dall. Holotype. Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1477, pl. 49, fig. 11.

114607. Crassatellites (Crassinella) triangulatus Dall. Holotype. Chipola (Oligocene). Alum Bluff, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1476, pl. 49, fig. 16.

43646. Crateripora erecta Ulrich.

Holotype.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 29, pl. 7, figs. 29, 29a.

= Attached base of Arthropora shafferi.

43729. Crateripora lineata Ulrich.

Holotype.

Utica (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 30, pl. 7, figs. 28, 28a.

= Attached base of Escharopora falciformis.

43730. Crateripora lineata expansa Ulrich.

Holotype.

Lorraine (Ord.). Hamilton, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 30.

= Attached base of Escharopora falciformis.

114891. Crenella duplinensis Dall.

Holotype.

Miocene. Natural Well, Duplin County, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 8v4, pl. 35, fig. 6.

1925. Crenella elegantula Meek and Hayden. Holotype and paratypes.

Fox Hills (Cret.). Deer Creek, North Platte, Wyoming.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1861, p. 441.— Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 75, pl. 28, figs. 6a-c.

114624. Crenella minuscula Dall.

Holotype.

Oligocene. Alum Bluff, Chattahoochee River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 803, pl. 35, fig. 22.

14360. Crenipecten hallanus Walcott. Cotypes. Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol, Surv., 1884, p. 231, pl. S. figs. 7, 70.

24576. Crepicephalus Loganellus anytus Hall and Whitfield.

Cotypes

Upper Cambrian. Schell Creek, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt.II, 1877, p. 210, pl. 2, figs. 19-21.

→ Ptychoparia? anytus.

15430. Crepicephalus augusta Walcott.

Cotypes.

Lower Cambrian. Pioche, Nevada.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 208, pl. 28, figs. 2-2b; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 653, pl. 96, figs. 9-9b.

24581. Crepicephalus centralis Whitfield.

Cotypes.

Upper Cambrian. Castle Creek, Black Hills, South Dakota. Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 341, pl. 2, figs. 21-24.

= Ptychoparia centralis.

24573. Crepicephalus (Loganellus) granulosus Hall and Whitfield.
Cotypes.

Upper Cambrian. Eureka, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 214, pl. 2, figs. 2, 3.

= Ptychoparia? granulosa.

See Crepicephalus (Loganellus) simulator.

24660. Crepicephalus (Loganellus) haguei Hall and Whitfield.

Cotypes.

Upper Cambrian. West side of Pogonip Mountain and near French Mine, White Pine District, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par, IV, Pt. II, 1877, p. 210, pl. 2, figs. 14, 15.

15428. Crepicephalus liliana Walcott.

Cotypes.

Lower Cambrian. Pioche, Nevada.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 207, pl. 28, figs. 3-3c; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 653, pl. 96, figs. 7-7c.

24617. Crepicephalus (Loganellus) maculosus Hall and Whitfield.
Cotypes.

Middle Cambrian. Eureka, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 215, pl. 2, figs. 24, 26.

= Ptychoparia maculosa.

24572. Crepicephalus (Loganellus) nitidus Hall and Whitfield.

Cotypes.

Upper Cambrian. Eureka, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 212, pl. 2, figs. 8-10.

= Ptychoparia? nitidus.

24580. Crepicephalus planus Whitfield.

Cotypes.

Upper Cambrian. Castle Creek, Black Hills, Soutl Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 343, pl. 2, fig. 20.

=Ptychoparia planus.

15432. Crepicephalus? (Loganellus) quadrans Hall and Whitfield.
Cotypes.

Middle Cambrian. Canyon above Calls Fort, Wasatch Range, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 238, pl. 2, figs. 11-13.

=Ptychoparia quadrans.

24575. Crepicephalus (Loganellus) simulator Hall and Whitfield.
Cotypes.

Upper Cambrian. Eureka, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 218, pl. 2, figs. 16-18.

= Ptychoparia ? simulator.

See Crepicephalus (Loganellus) granulosus.

35232. Crepicephalus texanus (Shumard). Plesiotype.
Middle Cambrian. Coosa Valley, Alabama.

Walcott, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 460, pl. 65, fig. 5.

24574. Crepicephalus (Loganellus) unisulcatus Hall and Whitfield. Cotypes.

Upper Cambrian. Eureka, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 216, pl. 2, figs. 22, 23.

= Ptychoparia? unisulcata.

163532. Crepidula æsop Dall.

Holotype.

Pliocene. Shell Creek, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 55, figs. 6, 7.

3496. Crepidula prærupta Conrad. 3564. Miocene. Astoria, Oregon.

Holotype.

Conrad, Wilkes U. S. Expl. Exped., X, 1849, p. 727, Atlas. pl. 19. figs. 9a, 10a, b.

164900. Crepidula precursor Dall.

Holotype.

Eocene. Chichagof Cove, Alaska.

Dall, Harriman Alaska Exped., IV, 1904, p. 110, pl. 9, fig. 3.

1839. Crepidula princeps Conrad.

Holotype.

Post-tertiary. Santa Barbara, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean. V. 1856, p. 326, pl. 6, figs. 52, 52a.

[Probably the same as Crepidula prærupta Conrad. W. H. Dall.]

164918. Crepidula ungana Dall.

Cotypes.

Miocene. Coal Bluff, Unga Island, Shumagins, Alaska.

Dall, Harriman Alaska Exped., IV, 1904, p. 119, pl. 10, figs. 8,9

Holotype.

Cotypes.

43229. Crepipora? epidermata Ulrich. Cotypes and figured sections. Richmond (Ord.). Wilmington, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 471, pl. 40, figs. 1c-1e. = Bythotrypa epidermata.

43234. Crepipora hemisphærica Ulrich. Cotype and figured sections. Richmond (Ord.). Wilmington, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 472, pl. 40, figs. 5a, 5b.

43231. Crepipora impressa Ulrich.
Utica (Ord.). Covington, Kentucky.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 471, pl. 40, figs. 2-2a.

43235. Crepipora perampla Ulrich. Figured sections and fragment of holotype.

Stones River (Ord.). Fillmore County, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 323, pl. 28, figs. 29-32.

43230. Crepipora simulans Ulrich. Cotypes and figured sections. Lorraine (Ord.). Covington, Kentucky.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 470, pl. 39, figs. 4, 4a; pl. 40, figs. 3, 3a.

43232. Crepipora solida Ulrich.
Utica (Ord.). Near Covington, Kentucky.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 472, pl. 40, figs. 4-4b.

43228. Crepipora spatiosa Ulrich. Holotype and figured sections. Trenton (Ord.). Harrodsburg, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 323.

43233. Crepipora subæquata Ulrich. Holotype and figured sections. Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 322, pl. 28, figs. 26-28.

115513. Crepitacella cepula (Guppy). Holotype. Miocene. Cumana, Venezuela.

Guppy, Geol. Mag., London, Dec. I, IV, 1867, p. 500; Dec. II, I, 1874, p. 442.

See Melanopsis capula.

35410. Cribroblastus schucherti Hambach. Cotypes.

Lower Carboniferous. Divide between Ross Fork and
Lincoln Valley, Montana.

Hambach, Trans. Acad. Sci. St. Louis, XIII, 1903, p. 59, pl. 5, figs. 8, 8a.

Oligocene. One mile below Baileys Ferry, Chipola Rive Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892 p. 349. 116663. Crucibulum costatum (Say.). Plesiotypes.
Miocene. Shiloh and Bridgeton, New Jersey.
Whitfield Mon XXIV II S Geol Surv 1804 P. 122 Pl. 22

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 122, pl. 22, figs. 11-14.

115611. Crucibulum piliferum Guppy. Cotypes.
Pliocene. Matura, Trinidad.
Guppy, Geol. Mag., London, Dec. II, I, 1874, p. 435.

115612. Crucibulum subsutum Guppy. Holotype.
Pliocene. Matura, Trinidad, British West Indies.
Guppy, Geol. Mag., London, Dec. II, I, 1874, p. 435, pl. 18, fig. 4.

39916. Crumenæcrinites ovales Troost. Chirotype.
Silurian. Decatur County, Tennessee.
Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 62.

8614. Cruziana linnarsoni White. Cotypes.
Tonto (Cambrian). Grand Canyon of the Colorado River,
Mohave County, Arizona.

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 8 vo., 1874, p. 5; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1877, p. 32, pl. 1, figs. 2a-2c.

8615. Cruziana rustica White. Cotypes.
Tonto (Cambrian). Grand Canyon of the Colorado River,
Mohave County, Arizona.

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 8 vo., 1874, p. 5; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1877, p. 33, pl. 1, figs. 1a, 1b.

4951. Cryphæus boothii Green. Plastotype.
Hamilton (Dev.). Huntingdon County, Pennsylvania.

Green, Amer. Journ. Sci., XXXII, 1837, p. 344. Cast No. 50.

= Dalmanites (Cryphæus) boothii.

4969. Cryphæus collitelus Green. Plastotype.
Hamilton (Dev.). Alexandria, Pennsylvania.

Green, Amer. Journ. Sci., XXXII, 1837, p. 346. Cast. No. 55.

= Dalmanites (Cryphæus) boothii calliteles.

4921. Cryptolithus tessellatus Green. Plastotype.
Trenton or Utica (Ord.). Trenton Falls, New York.

Green, Mon. Trilobites of N. America, Phila., 1832, p. 73. Casts Nos. 28, 29.

=Cryptolithus concentricus.

13861. Cryptonella? circula Walcott.

Middle Devonian. Lone Mountain, near Eureka, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 163, pl. 15, figs. 2-2b.

13860. Cryptonella pinonensis Walcott. Holotype. Upper Devonian. The Gate, near Eureka, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 163, pl. 4, figs. 4-4b.

25548. Cryptorhynchus annosus Scudder. Plesiotype.
Older Tertiary. Roan Mountains, Western Colorado, and
White River, Eastern Utah.

Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 128, pl. 11, fig. 10.

25547. Cryptorhynchus durus Scudder. Holotype.
Older Tertiary. Roan Mountains, Western Colorado.
Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 126, pl. 11, fig. 8.

38865. Cryptozoe problematicus Packard. Holotype.
Coal Measures. Mazon Creek, Illinois.

Packard, Proc. Amer. Philos. Soc., XXIII, 1886, p. 381, plate figs. 1, 2.

33799. Cryptozoon? occidentale Dawson. Cotypes. Chuar (Algonkian). Grand Canyon, Arizona.

Walcott, Bull. Geol. Soc. Amer., X, 1899, p. 233, pl. 23, figs. 1-4.

41489. Ctenobolbina alata Ulrich. Cotypes.
Utica (Ord.). Cincinnati, Ohio.
Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 110, pl. 7, figs. 4a-c.

41319. Ctenobolbina (? Bollia) antespinosa Ulrich. Holotype.
Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 187, pl. 15, figs. 9a-c.

41494. Ctenobolbina armata Ulrich. Holotype.
Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIX, 1900, p. 181, pl. 8, fig. 6.

41490. Ctenobolbina bispinosa Ulrich. Holotype.
Utica (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII 1890, p. 110, pl. 7, fig. 6.

41495. Ctenobolbina cavimarginata Ulrich. Cotypes.
Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIX, 1900, p. 182, pl.
8, figs. 7-9.

41492. Ctenobolbina ciliata (Emmons). Plesiotypes.
Utica (Ord.). Cincinnati, Ohio.
Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 108, 1
figs. 1a, 1b.

41325. Ctenobolbina ciliata emaciata Ulrich. Holotype. Richmond (Ord.). Savannah, Illinois.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 109, pl. 7, figs. 3a-c.

41497. Ctenobolbina crassa (Ulrich). Cotypes.

Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 675, pl. 44, figs. 12-16.

See Jonesella crassa.

41322. Ctenobolbina fulcrata Ulrich.

Cotypes.

Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, p. 674, pl. 44, figs. 8-11.

41324. Ctenobolbina granosa Ulrich. Holotype.
New Scotland (Dev.). Albany County, New York.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIX, 1900, p. 183, pl. 8, fig. 12.

41320. Ctenobolbina informis Ulrich. Holotype.

Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 187, figs. 6a-c.

41318. Ctenobolbina insolens Ulrich.

15, fig. 7.

Cotypes.

Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIX, 1900, p. 182, pl. 8, figs. 10, 11.

41323. Ctenobolbina loculata Ulrich. Cotypes. Kinderhook (Miss.). Mt. Pleasant, Tennessee.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIX, 1900, p. 184, pl. 8, figs. 13, 14.

41370. Ctenobolbina minima Ulrich. Holotype. Hamilton (Dev.). Eighteen Mile Creek, near Buffalo,

New York.
Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 188, pl.

41328. Ctenobolbina obliqua Ulrich. Holotype.

Trenton (Ord.). Kenyon, Minnesota.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIX, 1900, p. 180, pl. 8, fig. 4.

41321. Ctenobolbina papillosa Ulrich. Holotype.
Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 186, pl. 15, figs. 8a-c.

41578. Ctenobolbina punctata Ulrich.

Rochester (Sil.). Lockport, New York.

Holotype

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 186, pl. 12, figs. 5a-c.

41317. Ctenobolbina spiculosa Ulrich. Holotype. Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIX, 1900, p. 181, pl. 8, fig. 5.

41316. Ctenobolbina subcrassa Ulrich. Cotypes.
Stones River (Ord.). High Bridge, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIX, 1900, p. 180, pl. 8, figs. 1-3.

41326. Ctenobolbina tumida Ulrich. Holotype. Richmond (Ord.). McKinneys, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 111, pl. 7, figs. 5a, b.

46122. Ctenodonta albertina Ulrich. Cotypes. Richmond (Ord.). Clarksville, Ohio.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 598, pl. 42, figs. 76–82.

46123. Ctenodonta alta (Hall). Plesiotype.

Trenton (Ord.). Near Fountain, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 602, pl. 42, figs. 93, 94.

46124. Ctenodonta calvini Ulrich.

Cotypes.

Richmond (Ord.). Graf, Iowa.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 596, pl. 42, figs. 61–64.

46125. Ctenodonta carinata Ulrich. Cotypes.

Trenton (Ord.). Near Fountain, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 589, pl. 42, figs. 41-43.

28164. Ctenodonta carpenderi Schuchert. Cotypes.
Trenton (Ord.). Head of Frobisher Bay, Baffin Land.
Schuchert, Proc. U. S. Nat. Mus., XXII, 1900, p. 160, pl. 13, figs. 1-3.

46127. Ctenodonta cingulata (Ulrich). Plesiotypes. Richmond (Ord.). Boyle County, Kentucky.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 680, pl. 48, figs. 10, 11.

See Tellinomya cingulata.

46128. Ctenodonta compressa (Ulrich). Holotype and plesiotypes.

Black River (Ord.). Five miles south of Cannon Falls,

Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 600, pl. 37, fig. 29; pl. 42, figs. 88–90.

See Tellinomya compressa.

46129. Ctenodonta cuneiformis Ulrich. Cotypes.

Black River (Ord.). Six miles south of Cannon Falls,

Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 587, pl. 42, figs. 31-33.

46130. Ctenodonta fecunda (Hall). Plesiotypes. Richmond (Ord.). Near Dubuque, Iowa.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 595, pl. 42, figs. 67-73.

46131. Ctenodonta filistriata Ulrich.

figs. 11-14.

Cotypes.

Utica (Ord.). Covington, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 599, figs. 44a-e.

28165. Ctenodonta frobisherensis Schuchert. Cotypes.

Trenton (Ord.). Head of Frobisher Bay, Baffin Land.

Schuchert, Proc. U. S. Nat. Mus., XXII, 1900, p. 161, pl. 13,

46132. Ctenodonta gibberula Salter. Plesiotype. Stones River (Ord.). Murfreesboro, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 599, figs. 44f, g.

46133. Ctenodonta hamburgensis (Walcott). Plesiotype.
Black River (Ord.). Chatfield, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 605, pl. 42, figs. 91, 92.

46134. Ctenodonta intermedia (Ulrich). Cotypes. Trenton (Ord.). Near Wykoff, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 601, pl. 42, figs. 95-97.

See Tellinomya intermedia.

46135. Ctenodonta longa (Ulrich). Holotype.

Black River (Ord.). Eight miles south of Cannon Falls,

Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 590, pl. 37, figs. 30, 31.

See Tellinomya longa.

46136. Ctenodonta madisonensis Ulrich. Holotype.

Richmond (Ord.). Madison, Indiana.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 597, pl. 42, figs. 65, 66.

46137. Ctenodonta medialis Ulrich. Cotypes.

46138. Black River (Ord.). Six miles south of Cannon Falls, Minnesota.

Trenton (Ord.). Kenyon, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 593, pl. 42, figs. 50-52.

46139. Ctenodonta nasuta (Hall). Plesiotype.

Black River (Ord.). Six miles south of Cannon Falls,

Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 584, pl. 42, fig. 30.

46140. Ctenodonta nasuta robusta Ulrich. Holotype.

Black River (Ord.). Paquette Rapids, Ottawa River,
Canada.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 585.

See Tellinomya nasuta.

46141. Ctenodonta nitida (Ulrich).

Cotypes.

Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 592, pl. 42, figs. 44-49.

See Tellinomya nitida.

46142. Ctenodonta obliqua (Hall). Plesiotypes.

46143. Richmond (Ord.). Scales Mound, Illinois.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 604, pl. 42, figs. 83-87.

46144. Ctenodonta oviformis Ulrich. Holotype. Trenton (Ord.). Near Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 586, pl. 42, fig. 29.

46145. Ctenodonta perminuta Ulrich.

Cotypes.

Utica (Ord.). Cincinnati, Ohio.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 680, pl. 46, figs. 11-14.

46146. Ctenodonta planodorsata (Ulrich). Holotype and plesiotypes.

Black River (Ord.). Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 589, pl. 37, figs. 25-28; pl. 42, figs. 38-40.

See Tellinomya planodorsata.

46147. Ctenodonta recurva (Ulrich). Cotypes.

Richmond (Ord.). Near Spring Valley, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 603, pl. 42, figs. 98-101.

See Tellinomya recurva.

46148. Ctenodonta regia Ulrich.

Cotypes.

Trenton (Ord.). Near Burgin, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 585.

46149. Ctenodonta retrorsa Ulrich. Holotype.
Trenton (Ord.). Near Burgin, Kentucky.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 679, pl. 50, figs. 14, 15.

46150. Ctenodonta scofieldi Ulrich. Cotypes.

46151. Black River (Ord.). Six miles south of Cannon Fills.
Minnesota.

Trenton (Ord.). Goodhue County, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 539, pl. 42, figs. 53-58.

46152. Ctenodonta similis (Ulrich). Plesiotypes. Richmond (Ord.). Spring Valley, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 604, pl. 42, figs. 102, 104-106.

See Tellinomya similis.

46153. Ctenodonta simulatrix Ulrich. Holotype. Richmond (Ord.). Spring Valley, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 601, pl. 42, figs. 95-97.

46154. Ctenodonta socialis Ulrich. Cotypes.

46155. Black River (Ord.). Chatfield and six miles south of Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 594, pl. 42, figs. 59, 60.

46156. Ctenodonta subnasuta Ulrich. Holotype.

Trenton (Ord.). Near Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 585, pl. 42, figs. 34-36.

28163. Ctenodonta subnasuta Ulrich? Plesiotypes.
Trenton (Ord.). Head of Frobisher Bay, Baffin Land.

Schuchert, Proc. U. S. Nat. Mus., XXII, 1900, p. 160, pl. 13, figs. 4-6.

430. Cucullæa (Idonearca?) cordata (Meek and Hayden).

Holotype and paratypes.

Fox Hills (Cret.). Moreau River, South Dakota.

Meek, Rep. U. S. Geol. Surv. Terr., IX, 1876, p. 89, pl. 29, figs. 6a, 6b.

See Arca (Cucullæa) cordata.

348. Cucullæa exigua Meek and Hayden. Holotype and paratype. Fort Pierre (Cret.). Mouth of Milk River, Montana.

Meek and Hayden, Proc. Acad. Sci. Phila., VIII, 1856, p. 275. = Trigonarca (Breviarca) exigua.

12546. Cucullæa haguei Meek.

Holotype.

Jurassic. Weber Canyon, Wahsatch Range, Utah.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 134, pl. 12, figs. 1-1b.

28955. Cucullæa haguei Meek.

Plesiotypes.

Jurassic. Yellowstone National Park.

Stanton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 618, pl. 73, fig. 1.

20089. Cucullæa increbescens White.

Holotype.

Jurassic. Wrangell Bay, Alaska.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 65, pl. 14, figs. 5, 6.

157834. Cucullæa matthewsoni Gabb. Plesiotypes.

Lower Tejon (Eocene). One mile southeast of Lower

Lake, Lake County, California.

Stanton, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. I, 1897, p. 1039, pl. 64, figs. 4, 5.

20245. Cucullæa nebrascensis Owen.

Holotype.

Fox Hills (Cret.). Fox Hills, between Cheyenne and Moreau Rivers, South Dakota.

Owen, Rept. Geol. Surv. Wis., Iowa and Minn., 1852, p. 582, pl. 7, figs. 1, 1a.

442. Cucullæa (Idonearca) nebrascensis (Owen). Plesiotypes. Fox Hills (Cret.). Fox Hills, North Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 88, pl. 29, figs-5a, 5b.

7849. Cucullæa (Trigonarca) obliqua Meek. Cotypes.
Colorado (Cret.). East Canyon Creek, Wahsatch Range,
Utah.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 148, pl. 14, figs. 1a.

443. Cucullæa (Idonearca) shumardi (Meek and Hayden).

Holotype and paratypes.

Fox Hills (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 86, pl. 28, figs. 15a-g; pl. 29, fig. 4.

See Arca (Cucullæa) shumardi and Idonearca shumardi.

9890. Cucullæa terminalis Conrad.

Cotypes.

Lower Cretaceous. Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 148, pl. 4, figs. 2a, 2b.

46158. Cuneamya curta Whitfield.

Plesiotype.

Richmond (Ord.). Waynesville, Ohio.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 477, fig. 3.

46159. Cuneamya oblonga Ulrich.

Holotype.

Trenton (Ord.). Dixon, Illinois.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 623, pl. 36, figs. 40, 41.

1:38 RULLEYIN 32 UNITED STATES NATIONAL MUSEUM. And Cancamya sulcodorsata Urich. Holotype Exchanged Onl.). Spring Valley, Minnesota. Thich, Nineteenth Ann. Rept. Geol. and Nat. Hist. Surv. Min. :842 p. 248, fig 32. =Saffordia sukodorsata. anne. Caneamya truncatula Ulrich. Hairense Trenton Onl. Near Wokoff, Minnesota. Thick Got and Nat. Hist Surv. Minn., Final Rept. II. P. I. there is done the take the take name Capellactinites buchii Troos. CHETTE Minute. Persitur County, Tempessee. Trace Proc. Amer. Assoc. Adv. Sci., II, 1850., 2, no. ways. Carellacrimites corrugatus Troos. Chierra Silmun Decution County, Tempessee. Trace Free Amer. Assoc. Adv. Sci., II., 1850, p. m. 2012 Capellinamentes inflatos Troce. Zin-it-ize Shirtan Peters County, Tempesee. Trans. From Amer. Assoc. Afr. Sec. II. 1981, p. 10. ware Capellacrimies lavis Track THE TE Silmen Mount Glade Deceme County, Termesee. Proce Proc Amer Assoc Air Sec. II 1882, 2, 20 ther Digellerance magnifices Trace Zmarye. Simum Teams Comey Temesee.

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135691. Cuspidaria (Cardiomya) craspedonia Dall. Holotype. Bowden (Oligocene). Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1506, pl. 57, fig. 17.

135692. Cuspidaria (Bowdenia) distira Dall. Holotype.
Bowden (Oligocene). Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1506, pl. 57, fig. 16.

Cyathocrinites. See Cyathocrinus.

39950. Cyathocrinus conglobatus Troost. Chirotype.
Ordovician. Near Nashville, Tennessee.
Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 61.

39945. Cyathocrinus corrugatus Troost. Chirotype.

Mississippian?. Harpeth Ridge, Davidson County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 61.

39971. Cyathocrinus crateriformis Troost. Chirotype.
Silurian. Decatur County, Tennessee.
Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 61.

40894. Cyathocrinus crawfordsvillensis Miller. Holotype. Keokuk (Miss.). Crawfordsville, Indiana.

Miller, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 79, pl. 3, fig. 1.

39969. **Cyathocrinus depressus** Troost. Chirotypes. Mississippian. White Creek Springs, Davidson County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 61.

39946. Cyathocrinus gracilis Troost. Chirotype. Mississippian. Near Sparta, White County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 61.

40895. Cyathocrinus harrisi Miller. Holotype. Keokuk (Miss.). Crawfordsville, Indiana.

Miller, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 255, pl. 15, fig. 2.

39943. Cyathocrinus inflatus Troost. Chirotypes.
Mississippian. Near Huntsville, Tennessee.
Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 61.

39972. Cyathocrinus robustus Troost. Chirotypes Silurian?. Harpeth Ridge, Davidson County, Tennessee Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 61.

39944. Cyathocrinus römerii Troost. Chirotype.
Mississippian. Near Huntsville, Alabama.
Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 61.

39951. Cyathocrinus sculptus Troost. Chirotype.
Ordovician. Knox County, Tennessee.
Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 61.

39942. Cyathocrinus stellatus Troost. Chirotype.
Mississippian?. Stewart County, Tennessee.
Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 61.

8033. Cyathocrinus stillativus White. Holotype.
Upper Carboniferous. Thirty miles west of Humboldt,
Kansas.

White, Proc. U. S. Nat. Mus., II, 1880, p. 258, pl. 1, figs. 9, 10; Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1883, p. 125, pl. 35, figs. 3a, 3b.

39948. Cyathocrinus tennesseæ Troost. Chirotype.
Silurian. Decatur County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 61.

Oligocene Guadaloupe Island, Lesser Antilles.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903.
p. 1527, pl. 53, fig. 6.

Oligocene. Guadaloupe Island, Lesser Antilles.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1527, pl. 53, fig. 8.

5176. Cyathodonta vicksburgiana Dall. Holotype. Vicksburgian (Oligocene). Vicksburg, Mississippi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1526, pl. 57, fig. 27.

25349. Cyathophycus reticulatus Walcott. Plesiotype.
Utica (Ord.). Near Holland Patent, New York.

Rauff, Palaeontographica, XL, 1894, p. 252, pl. 2, fig. 1.

14553. Cyathophyllum arcticum Meek. Cotypes.

Base of Upper Devonian. Grand River, Mackenzie River
Basin, Canada.

Meek, Trans. Chicago Acad. Sci., I, 1868, p. 79, pl. 11, figs. S-8b.

17934. Cyathophyllum fungites Fleming?. Plesiotype. Keokuk or Warsaw (Miss.). Keokuk Rapids of Mississippi River, Iowa.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, pl. 4. fig. 4.

24544. Cyathophyllum (Campophyllum?) nevadense Meek.

Holotype

Upper Carboniferous. Boxelder Peak, Wahsatch Range, Utah.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 60, pl. 5, figs. 3-3b.

14545. Cyathophyllum palmeri Meek.

Holotype.

Middle Devonian. Rio Verde, Arizona.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 33, pl. 2, fig. 2.

24545. Cyathophyllum subcæspitosum Meek. Holotype.

Upper Carboniferous. Near Swansea, White Pine District,
Nevada.

Meek, Sixth Ann. Rept. U. S. Geol, Surv. Terr., 1872 (1873), p. 470, in a footnote; Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 60, pl. 5, figs. 4-4b.

17953. Cyathophyllum (vermiculare Goldfuss?) torquium Owen. Holotype.

Upper Carboniferous. Keg Creek, Iowa.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, tab. IV, fig. 2.

=Campophyllum torquium.

13314. Cyclas estrellana Conrad.

Holotype.

13351. Miocene. Estrella, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 192, pl. 6, fig. 6.

2125. Cyclas formosa Meek and Hayden. Paratypes.

Laramie (Cret.). Ten miles below Fort Union, North
Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 115.

=Sphærium formosum.

2125. Cyclas fragilis Meek and Hayden. Cotypes.

Laramie (Cret.). Ten miles below Fort Union, North
Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 115.

=Sphærium formosum.

13340. Cyclas permacra Conrad.

Holotype.

Miocene. Sierra Monica, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 192, pl. 7, fig. 4.

2128. Cyclas subellipticus Meek and Hayden. Holotype and paratype.

Laramie (Cret.). Ten miles below Fort Union, North Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Pl.ila., VIII, 1856, p. 115.

=Sphærium subellipticum.

135257. Cyclinella gatunensis Dall.

Eocene. Gatun, Panama Canal, Panama.

Holotype.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1285, pl. 52, fig. 18.

- 46161. Cycloconcha mediocardinalis Miller. Plesiotype. Lorraine (Ord.). Covington, Kentucky.

  Ulrich, Geol. Surv. Ohio, VII, 1893, p. 686, pl. 48, fig. 12.
- 46162. Cycloconcha milleri (Meek). Plesiotypes.
  47344. Richmond (Ord.). Versailles, Indiana; Hanover, Ohio.
  Ulrich, Geol. Surv. Ohio, VII, 1893, p. 686, pl. 51, figs. 14-21.
  See Anodontopsis? milleri.
- 46163. Cycloconcha ovata Ulrich. Cotypes. Utica (Ord.). Covington, Kentucky.

  Ulrich, Geol. Surv. Ohio, VII, 1893, p. 687, pl. 48, figs. 13-15.
- 40733. Cyclocystoides magnus Miller and Dyer. Plesiotype. Richmond (Ord.). Waynesville, Ohio.

  Miller and Dyer, Journ. Cincinnati Soc. Nat. Hist., IV, 1881, p. 70, pl. 1, figs. 2, 2a.
- 45763. Cyclonema bilix (Conrad). Plesiotypes.
  45764. Richmond (Ord.). Versailles, Indiana; Waynesville and
  45765. Clarksville, Ohio.

  Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final

Rept., III, Pt. II, 1897, p. 1058, pl. 78, figs. 35-37.

- 45766. Cyclonema bilix conicum Miller. Plesiotypes. Richmond (Ord.). Versailles, Indiana.

  Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1058, pl. 78, figs. 38, 39.
- 45767. Cyclonema bilix fluctuatum James. Plesiotype. Richmond (Ord.). Versailles, Indiana.

  Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1059, pl. 78, figs. 40-42.
- 45768. Cyclonema gracile Ulrich. Cotypes.
  45769. Lorraine (Ord.). Newport, Kentucky; Cincinnati, Ohio.
  Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt.
  II, 1897, p. 1062, pl. 82, figs. 55-58.

45770. Cyclonema gracile striatellum Ulrich. Holotype. Lorraine (Ord.). Newport, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1062, pl. 82, figs. 59-61.

45771. Cyclonema humerosum Ulrich.

Cotypes.

Lorraine (Ord.). Cincinnati, Ohio.

Richmond (Ord.). Waynesville, Ohio.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1061, pl. 78, figs. 43-46.

45773. Cyclonema inflatum Ulrich.

45772.

Cotypes.

Lorraine (Ord.). Covington, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1060, pl. 78, figs. 31, 32.

45774. Cyclonema (Holopea?) limatum Ulrich. Cotypes. Lorraine (Ord.). Covington, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. 11, 1897, p. 1063, pl. 82, figs. 62-64.

45775. Cyclonema mediale Ulrich.

Cotypes.

Lorraine (Ord.). Covington, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1059, pl. 78, figs. 29, 30.

46052. Cyclonema (Gyronema?) præciptum Ulrich. Holotype. Stones River (Ord.). Murfreesboro, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1055, pl. 78, figs. 22-25.

45776. **Cyclonema pyramidatum** James. Plesiotype. Lorraine (Ord.). Near Morrow, Ohio.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1061, pl. 78, figs. 33, 34.

45777. Cyclonema simulans Ulrich.

Holotype.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1061, pl. 78, fig. 47.

45778. Cyclonema sublæve Ulrich.

Cotypes.

Lorraine (Ord.). Covington, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1062, pl. 78, figs. 48, 49.

45779. Cyclonema transversum Ulrich.

Cotypes.

Lorraine (Ord.). Cincinnati, Ohio; Covington, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1062, pl. 82, figs. 65-67.

45781. Cyclonema varicosum Hall.

Plesiotypes.

45782. Trenton (Ord.). Colby, Kentucky; Nashville, Tennessee.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1060, pl. 78, figs. 27, 28,

45780.

- 194 BULLETIN 53, UNITED STATES NATIONAL MUSEUM.
- 43403. Cyclopora expatiata Ulrich. Cotypes and figured sections.
  Warsaw (Miss.). Warsaw, Illinois.
  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 673, pl. 68, figs. 4-4d.
- 43401. Cyclopora fungia Prout. Plesiotypes and figured sections. 43402. Warsaw (Miss.). Warsaw and Nauvoo, Illinois.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 671, pl. 68, figs. 3-3g.
- 43400. Cycloporella? perversa Ulrich. Figured section of cotype. Keokuk (Miss.). Greene County, Illinois.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 676, pl. 69. figs. 3-3b.
- 43745. Cycloporella spinifera Ulrich. Figured sections of cotype. Keokuk (Miss.). Warsaw, Illinois.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 675, pl. 69, figs. 1a-1c.
- 45685. Cyclora depressa Ulrich. Cotypes.

  Lorraine (Ord.). Hamilton, Ohio.

  Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 13, pl. 7, figs. 9, 9a.
- Miocene. Jamaica, British West Indies.

  Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 291.
  pl. 17, fig. 5.
- Oligocene. Baileys Ferry, Chipola River, Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892.
  p. 420, pl. 22, fig. 35.
- 38863. Cyclus americana Packard. Cotypes.
  Upper Coal Measures. Mazon Creek, Grundy County.
  Illinois.
- Packard, American Nat., XIX, 1885, p. 293; Mem. Nat. Acad. Sci., 111, 1886, p. 143, pl. 5, figs. 1, 1a; pl. 6, figs. 4, 4a.
- Eocene. Manzanilla, Trinidad, British West Indies.

  Guppy, Geol. Mag., London, Dec. II, I, 1874, p. 407, pl. 18, fig. 22.
  - 282. Cylichna scitula Meek and Hayden. Holotype. Fox Hills (Cret.). Moreau River, South Dakota.

    Meek and Hayden, Proc. Acad. Nat. Sci. Phila., 1860, p. 178.—
    Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 276, pl. 31. figs. 3a, 3b.
  - 281. Cylichna? volvaria (Meek and Hayden). Holotype. Fox Hills (Cret.). Moreau River, South Dakota.

    Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 275, pl. 31. figs. 2a, 2b.

    See Bulla volvaria.

97478. Cylichnella gabbi Dall. Holotype.
Pliocene. Near Fort Thompson, Caloosahatchie River,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 59, fig. 12.

See Tornatina (Cylichnella) gabbi.

Cotypes.
Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 13, pl. 1, fig. 6a.

- 46550. Cylindrocœlia covingtonensis Ulrich. Cotypes.
  Lorraine (Ord.). Covington, Kentucky.
  Ulrich, Amer. Geol., III, 1889, p. 247.
- 46551. Cylindrocœlia minnesotensis Ulrich. Cotypes. 46552. Black River (Ord.). Fountain, and Minneapolis, Minnesota.

Ulrich, Amer. Geol., III, 1889, p. 248.—Winchell and Schuchert, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 78, pl. G, figs. 1-3.

- 46164. Cymatonota attenuata Ulrich. Cotypes.
  Richmond (Ord.). Waynesville, Ohio.
  Ulrich, Geol. Surv. Ohio, VII, 1893, p. 664, pl. 55, figs. 12-14.
- 46165. Cymatonota constricta Ulrich. Holotype. Richmond (Ord.). Hanover, Butler County, Ohio.

  Ulrich, Geol. Surv. Ohio, VII, 1893, p. 664, pl. 55, figs. 10, 11.
- 46166. Cymatonota productifrons Ulrich. Holotype.
  Utica (Ord.). Covington, Kentucky.
  Ulrich, Geol. Surv. Ohio, VII, 1893, p. 665, pl. 55, figs. 17, 18.
- 46167. Cymatonota recta Ulrich. Cotypes. 46168. Lorraine (Ord.). Newport, Kentucky; Cincinnati, Ohio. Ulrich, Geol. Surv. Ohio, VII, 1893, p. 662, pl. 55, figs. 8, 9.
- 46169. Cymatonota semistriata Ulrich. Holotype.
  Richmond (Ord.) Clarksville, Ohio.
  Ulrich, Geol. Surv. Ohio, VII, 1893, p. 663, pl. 55, figs. 6, 7.
- 46170. Cymatonota typicalis Ulrich. Cotypes.
  Richmond (Ord.) Waynesville, Ohio.
  Ulrich, Geol. Surv. Ohio, VII, 1893, p. 662, pl. 55, figs. 1-5.
  See Chænodomus typicalis.
- 24646. Cyphaspis? brevimarginatus Walcott. Holotype.
  Upper Pogonip (Ord.). Ridge east of Hamburg Ridge
  Eureka District, Nevada.

  Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 93, pl. 12, fig. 10.

1894, p. 759, fig. 82.

41956. Cyphaspis? galenensis Clarke. Holotype.
Trenton (Ord.). Cannon Falls, Minnesota.

Clarke, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II,

43017. **Cyphaspis stephanophora** Hall and Clarke. Plastotype. Onondaga (Dev.). Canandaigua, New York.

Hall and Clarke, Nat. Hist. New York, Pal. VII, 1888, p. 142, pl. 24, fig. 2.

9838. Cyphosoma texanum (Roemer). Plesiotypes. Fredericksburg (Lower Cret.). Leon Springs, Texas.

Hall, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 145.

= Diplopodia texanum.

43189. Cyphotrypa acervulosa (Ulrich). Figured sections of holotype.

Trenton (Ord.). Decorah, Iowa.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 30, pl. 8, figs. 1-3.

See Leptotrypa acervulosa.

43188. Cyphotrypa frankfortensis Ulrich and Bassler. Holotype and figured sections.

Trenton (Ord.). Frankfort, Kentucky.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XI,VII, 1904, p. 30, pl. 8, figs. 7-9.

43192. Cyphotrypa wilmingtonensis Ulrich and Bassler. Holotype and figured sections.

Richmond (Ord.). Wilmington, Illinois.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 31, pl. 8, figs. 4-6.

164928. Cypræa chilona Dall.

Chipola (Oligocene). Alum Bluff, Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, pl.

39. figs. 1, 3.

135157. Cypræa dalli Aldrich. Holotype. Eocene. Red Bluff, Wayne County, Mississippi.

Aldrich, The Nautilus, VII, No. 9, 1894, p. 98, pl. 4, fig. 2.

Cotypes.

112073. Cypræa heilprinii Dall.

Cotypes.

114103. Oligocene. Ballast Point, Tampa, and Chipola River,

Oligocene. Ballast Point, Tampa, and Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 166, pl. 11, figs. 2, 2a.

114099. Cypræa pinguis Conrad. Plesiotypes.

Oligocene. Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 164, pl. 11, figs. 1, 1a.

112209. Cypræa (Siphocypræa) problematica (Heilprin).

Pliocene Caloosahatchie River near Fort Thompson.

Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 167, pl. 5, figs. 10, 10b.

## 112441. Cypræa willcoxi Dall.

Holotype.

Oligocene. Near Osprey, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 166, pl. 5, figs. 12b, 12c.

3642. Cypricardia acutifrons Dana.

Holotype.

Carboniferous. District of Illawarra, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 702, Atlas, pl. 8, figs. 4a, 4b.

3646. Cypricardia arcodes Dana.

Holotype.

Carboniferous. Harpers Hill on the Hunter, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 702, Atlas, pl. 8, figs. 8a, 8b.

28941. Cypricardia? haguei Stanton'.

Cotypes.

Jurassic. Yellowstone National Park.

Stanton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 623, pl. 73, figs. 11-13.

3641. Cypricardia imbricata Dana.

Cotypes.

Carboniferous. Harpers Hill on the Hunter, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 702, Atlas, pl. 8, fig. 5.

15071. Cypricardia occidentalis Hall.

Holotype.

Upper Carboniferous. Big Blue River, Kansas.

Hall, Stansbury's Expl. and Surv. Valley Great Salt Lake, Utalr, 1852, p. 412, pl. 2, fig. 2.

3667. Cypricardia prærupta Dana.

Holotype.

Carboniferous. District of Illawarra, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 703, Atlas, pl. 8, fig. 10.

3632. Cypricardia simplex Dana.

Holotype.

Carboniferous. New South Wales.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 703, Atlas, pl. 9, fig. 2.

13920. Cypricardinia indenta (Conrad). Plesiotype

Middle Devonian. Atrypa Peak, Eureka District, Nevad

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 182, pl. 5, fig. 1. pl. 15, fig. 11.

46176. Cypricardites cingulata Ulrich. Holotype.

Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Nineteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn., 1892, p. 235, fig. 21.

=Cyrtodonta cingulata.

46544. Cypricardites ferrugineum Hall and Whitfield. Plastotype. Clinton (Sil.). Wilmington, Ohio.

Hall and Whitfield, Geol. Surv. Ohio., Pal. II, 1875, p. 116, pl. 5. fig. 11.

46181. Cypricardites germanus Ulrich.

Holotype.

Trenton (Ord.). Near Danville, Kentucky.

Ulrich, Nineteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn., 1892, p. 236, figs. 22a, b.

=Cyrtodonta grandis germanus.

46178. Cypricardites glabella Ulrich.

Holotype.

Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Nineteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn., 1892, p. 234, fig. 20.

=Cyrtodonta glabella.

46182. Cypricardites grandis Ulrich.

Cotypes.

Trenton (Ord.). One and one-half miles south of Burgin, Kentucky.

Ulrich, Amer. Geol., VI, 1890, p. 387, fig. 19; Nineteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn., 1892, p. 236, figs. 22c-e.

=Cyrtodonta grandis.

46326. Cypricardites haynianus (?) (Safford). Plesiotypes. Trenton (Ord.). Near Danville, Kentucky.

Ulrich, Nineteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn., 1892, p. 240, figs. 25a, 25b.

= Vanuxemia hayniana. See Cyrtodonta hayniana.

46307. Cypricardites? modestum Ulrich.

Holotype.

Trenton (Ord.). Cannon Falls, Minnesota.

Ulrich, Amer. Geol., X, 1892, p. 100, pl. 7, figs. 5-7.

--- Saffordia modesta.

46329. Cypricardites nanus Ulrich.

Cotypes.

Trenton (Ord.). One mile south of Burgin, Kentucky.

Ulrich, Nineteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn., 1892, p. 239, figs. 24a-d.

=Vanuxemia nana.

46330. Cypricardites obtusifrons Ulrich. Holotype. Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Nineteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn., 1892, p. 233, fig. 18.

=Vanuxemia obtusifrons.

46333. Cypricardites sardesoni Ulrich.

Holotype.

Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Nineteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn., 1892, p. 231, fig. 16.

=Vanuxemia sardesoni.

46193. Cypricardites tenellus Ulrich.

Cotypes.

Black River (Ord.). Six miles south of Cannon Falls, Minnesota.

Ulrich, Nineteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn., 1892, p. 237, fig. 23.

=Cyrtodonta tenella.

46335. Cypricardites terminalis Ulrich.

Cotype.

Stones River (Ord.). Cannon Falls, Minnesota.

Ulrich, Amer. Geol., X, 1892, p. 98, pl. 7, fig. 9.

=Vanuxemia terminalis.

41812. Cypridina herzeri Ulrich.

Holotype.

Waverly (Miss.). Richfield, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 209, pl. 14, figs. 9a-c.

20260. Cyprimeria? crassa Meek.

Cotypes.

Montana (Cret.). Popes Well, New Mexico.

Meek, Rept. Expl. Exped. Santa Fé to junction of Grand and Green Riv., Macomb, 1876, p. 128, pl. 1, figs 8a-c.

7848. Cyprimeria? subalata Meek.

Cotypes.

Colorado (Cret.). East Canyon, Wahsatch Range, Utah.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 158, pl. 15, fig. 7.

=Tellina? subalata.

1319. Cyprimeria? tenuis (Meek).

Cotypes.

Nanaimo (Cret.). Near Nanaimo, Vancouver Island.

Meek, Bull. U. S. Geol. and Geogr. Surv. Terr., II, 1876, p. 361, pl. 2, fig. 5.

See Dosinia? tenuis.

192. Cyprina arenaria Meek and Hayden.

Cotypes.

Dakota (Cret.). Two miles above mouth of Big Sioux River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1857, p. 143. = Cyrena dakotensis.

28939. Cyprina? cinnabarensis Stanton. Cotypes.

Jurassic. Cinnabar Mountain, Montana, and Yellowstone
National Park.

Stanton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 621, pl. 73, figs. 7, 8.

306. Cyprina compressa Meek and Hayden. Holotype.
Fox Hills (Cret.). Mouth of Moreau River, South
Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1857, p. 144. = Cyprina ovata compressa.

457. Cyprina cordata Meek and Hayden. Holotype. Fox Hills (Cret.). Moreau River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1857, p. 143.

=Sphæriola? cordata.

12362. Cyprina? dallii White.

Lower Cretaceous? Fossil Point, Port Möller, Alaska.

White, Bull. No. 4, U. S. Geol. Surv., 1884, p. 14, pl. 6, fig. 1.

444. Cyprina humilis Meek and Hayden.

Holotype and paratypes.

Fox Hills (Cret.). Branch of Cheyenne River, near

Black Hills, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1860, p. 179. = Veniella (Venilicardia) humilis.

28940. Cyprina? iddingsi Stanton. Holotype and paratypes.

Jurassic. Yellowstone National Park.

Stanton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 622, pl. 73, fig. 9.

23059. Cyprina occidentalis Whiteaves. Plesiotype.
Knoxville (Lower Cret.). Near Stephenson, Tehama
County, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 60, pl. 12, fig. 2.

306. Cyprina ovata Meek and Hayden. Holotype Fox Hills (Cret.). Mouth of Heart River, North Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1857, p. 144. Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 146, text fig. 8, pl. 29, figs. 7a-c.

306. Cyprina ovata compressa (Meek and Hayden). Holotype. Cretaceous. Mouth of Heart River, North Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 147, pl. 30, fig. II. See Cyprina compressa.

361. Cyprina subtumida Meek and Hayden. Holotype.
Montana (Cret.). Yellowstone River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1857, p. 144. = Veniella subtumida.

22883. Cyrena æquilateralis (Meek)? Plesiotypes.
Colorado (Cret.). Bear River City, Wyoming.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 102, pl. 22, figs. 14, 15.

20100. Cyrena brevidens White.

Cotypes.

Puget (Cret.). Palace Camp, Washington.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 58, pl. 10, figs. 8-11.

7877. Cyrena carletoni Meek.

Cotypes.

Montana (Cret.). Coalville, Utah.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 (1873), p. 495.—White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 20, pl. 12, figs. 16 a, b.

2133. Cyrena (Corbicula?) cytheriformis Meek and Hayden.

2135.

Holotype and paratypes.

Laramie (Cret.). Bad Lands of Judith River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1860, p. 176.

- 192. Cyrena dakotensis Meek and Hayden. Cotypes.
- 7901. Dakota (Cret.). Two miles above mouth of Big Sioux River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 159, pl. 1, figs. 1a-d, 1f.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 436, pl. 4, figs. 3, 4.

See Cyprina arenaria.

- 115030. Cyrena (Pseudocyrena) dupliniana Dall. Holotype.
  Miocene. Natural Well, Duplin County, North Carolina.

  Dall, Trans. Wagner Free Inst. Sci. Phila., HI, Pt. VI, 1903, p.
  1446, pl. 56, fig. 22.
  - 7621. Cyrena (Corbicula) durkeei Meek. Cotypes.
    Bear River (Cret.). Limestone Hill, Bear River, Wyoming.
    Meek, Proc. Amer. Philos. Soc., XI, 1871, p. 431.
    - =Corbicula durkeei.
  - 8613. Cyrena (Veloritina) durkeei (Meek). Plesiotypes.
    Colorado (Cret.). West crossing of north fork of Virgin
    River, Utah.

White, Rept. U. S. Geogr. Surv., W. 100th Merid., IV, Pt. I, 1876, p. 207, pl. 21, 13a, b.
[Not Corbicula durkeei Meek. T. W. Stanton.]

7840. Cyrena? holmesi Meek. Cotypes. Fox Hills (Cret.). Ralston Creek, about four miles north of Golden, Colorado.

Meek, Bull. U. S. Geol. & Geogr. Surv. Terr. (2), I, 1875, p. 45.

Meek, Bull. U. S. Geol. & Geogr. Surv. Terr. (2), 1, 1875, p. 45.

= Mactra? holmesi.

7822. Cyrena inflexa (Meek).

Cotypes.

Colorado (Cret.). Below Gallatin City, Missouri River, Montana.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1877 (1879), p. 290, pl. 10, figs. 7a, 7b.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 103, pl. 22, fig. 13..

See Corbicula (Veloritina) inflexa.

2131. Cyrena intermedea Meek and Hayden.

Holotype.

Laramie (Cret.). Moreau River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 116. =Corbicula nebrascensis.

2132. Cyrena moreauensis Meek and Hayden.

Cotypes.

Laramie (Cret.). Moreau River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 115. =Corbicula subelliptica moreauensis.

2134. Cyrena occidentalis Meek and Hayden.

Holotype and paratype.

Laramie (Cret.). Bad Lands of Judith River, Montana. Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 116. =Corbicula occidentalis.

100315. Cyrena pompholyx Dall.

Cotypes.

Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner, Free Inst. Sci. Phila., III, Pt. V, 1900, pl. 38, figs. 7, 8; Pt. VI, 1903, p. 1445.

22885. 22886.

22884. Cyrena (Veloritina) securis (Meek). Plesiotypes. Colorado (Cret.). Bear River City, and near Hilliard,

Wyoming.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 101, pl. 23. figs, 1-3.

8073. Cyrena securis (Meek).

Plesiotype.

Cretaceous. Hilliard Station, Wyoming.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1877 (1879), p. 289, pl. 3, figs. 2a-c.

157506. Cyrenoida caloosaensis Dall.

Holotype.

Pliocene. Caloosahatchie River, Florida.

Dall, The Nautilus, X, 1806, p. 52; Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1335, pl. 51, fig. 5.

5898. Cyrtina billingsi Meek.

Holotype.

Middle Devonian. Clear Water River, Mackenzie River Basin, Canada.

Meek, Trans. Chicago Acad. Sci., I, 1868, p. 97, pl. 14, figs. 6a-h.

13872. Cyrtina davidsoni Walcott.

Cotypes.

Upper Devonian. White Pine District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 146, pl. 3, figs. 2-2e.

24426. Cyrtina hamiltonensis (Hall). Plesiotypes.

Base of Upper Devonian. Porcupine River and the Ramparts, Mackenzie River, Canada.

Meek, Trans. Chicago Acad. Sci., I, 1868, p. 99, pl. 14, figs. 5a, 5b, 10a, 10b.

See Cyrtina panda.

24428. Cyrtina panda Meek.

Holotype.

Base of Upper Devonian. Onion River, Mackenzie River Basin, Canada.

Meek, Trans. Chicago Acad. Sci., I, 1868, p. 100, pl. 14, figs. 8a-d. = Cyrtina hamiltonensis.

28198. Cyrtoceras baffinensis Schuchert. Holotype.
Trenton (Ord.). Head of Frobisher Bay, Baffin Land.
Schuchert, Proc. U. S. Nat. Mus., XXII, 1900, p. 171, pl. 14, figs. 11-13.

14178. Cyrtoceras cessator Hall and Whitfield. Holotype.

Lower Carboniferous. Near Eberhardt Mills, White Pine
District, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 278, pl. 6, fig. 15.

28121. Cyrtoceras cornulum Schuchert.

Cotypes.

Trenton (Ord.). Head of Frobisher Bay, Baffin Land.

Schuchert, Proc. U. S. Nat. Mus., XXII, 1900, p. 170, pl. 14, figs. 8-10.

46525. Cyrtoceras minneapolis Clarke. Cotype. Stones River (Ord.). Minneapolis, Minnesota.

Clarke, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 808, pl. 59, figs. 7, 8.

13987. Cyrtoceras nevadense Walcott. Holotype.
Middle Devonian. Combs Peak, Eureka District, Nevada.
Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 203, pl. 17, figs.
7, 7a.

46526. Cyrtocerina? schoolcrafti Clarke. Holotype. Black River (Ord.). Near Cannon Falls, Minnesota.

Clarke, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 774, pl. 47, figs. 12–14.

46171. Cyrtodonta affinis Ulrich. Holotype.

Black River (Ord.). Six miles south of Cannon Fa<sup>†</sup>\*
Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt 1894, p. 540, pl. 39, figs. 20-22. 46172. Cyrtodonta affinis fillmorensis Ulrich. Holotype.

Trenton (Ord.). Wykoff, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 540, pl. 39, fig. 23.

46173. Cyrtodonta ampla Ulrich. Holotype.

Stones River (Ord.). Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 538, pl. 39, fig. 34.

46174. Cyrtodonta billingsi Ulrich. Cotype.

46175. Stones River (Ord.). Cannon Falls, Minnesota; Dunleith.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 538, pl. 40, figs. 2-6.

46176. Cyrtodonta cingulata (Ulrich). Holotype.

Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 545, pl. 40, figs. 7, 8.

See Cypricardites cingulata.

46228. Cyrtodonta gantii Safford.

Cotypes.

Trenton (Ord.). Wilson County, Tennessee.

Safford, Geol. Tenn., 1869, Pl. E, figs. 1a-d.

= Modiolodon gantii.

46177. Cyrtodonta gibbera Ulrich.

Holotype.

Trenton (Ord.). Thirteen miles south of Cannon Falls, Minnesota.

Ulrich, Geol, and Nat. Hist, Surv. Minn., Final Rept., III, Pt. II. 1894, p. 542, pl. 39, figs. 13-15.

28161. Cyrtodonta(?) gibbera Ulrich var. Holotype.

Trenton (Ord.). Head of Frobisher Bay, Baffin Land.

Schuchert, Proc. U. S. Nat. Mus., XXII, 1900, p. 162, pl. 13, figs. 34-36.

46178 Cyrtodonta glabella (Ulrich). Holotype and plesiotypes. to Black River (Ord.). Minneapolis, Minnesota.

46180. Stones River (Ord.). Beloit, Wisconsin; Dunleith, Illinois.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 543, pl. 39, figs. 37-40.

See Cypricardites glabella.

46182. Cyrtodonta grandis (Ulrich). Cotypes and plesiotypes.
46859. Trenton (Ord.). One and one-half miles south of Burgin.
Kentucky: Pleasant Grove, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1804, p. 547, figs. 43a-i; pl. 40, fig. 11.

See Cypricardites grandis.

46181. Cyrtodonta grandis germanus (Ulrich). Holotype and plesiotype.

Trenton (Ord.). Near Danville, Kentucky; Goodhue County, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 547, fig. 43j; pl. 40, figs. 9, 12.

See Cypricardites germanus.

46183. Cyrtodonta grandis intermedia Ulrich. Cotype.
Trenton (Ord.). Haynies Mill, Smith County, Tennessee.
Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 547, fig. 43k.

46324. Cyrtodonta hayniana Safford.

Cotypes.

Trenton (Ord.). Haynies, Tennessee.

Safford, Geol. Tenn., 1869, pl. F, figs. 1d, e.

=Vanuxemia hayniana.

See Cypricardites haynianus?

46184. Cyrtodonta obesa Ulrich.

Cotypes.

46185. Black River (Ord.). Mercer County, Kentucky; St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 542, pl. 39, figs. 8-12.

46186. Cyrtodonta oviformis Ulrich.

Holotype.

Stones River (Ord.). Janesville, Wisconsin.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 544, pl. 39, fig. 46; pl. 40, fig. 1.

46187. Cyrtodonta parva Ulrich.

Holotype.

Trenton (Ord.). Near Fountain, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 541, pl. 39, figs. 24, 25.

46188. Cyrtodonta persimilis Ulrich.

Cotypes.

46189. Stones River (Ord.). Minneapolis, Minnesota; Beloit, Wisconsin.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 544, pl. 39, figs. 41-44.

46190. Cyrtodonta rotulata Ulrich.

Cotypes.

46855. Black River (Ord.). Mercer County, Kentucky; Fountain, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 541, pl. 39, figs. 16-19.

46191. Cyrtodonta saffordi (Hall).

Plesiot<sup>1</sup>

Trenton (Ord.). Nashville, Tennessee.

Safford, Geol. Tenn., 1869, pl. F, fig. 2d.

28159. Cyrtodonta sillimanensis Ulrich. Cotypes.

Trenton (Ord.). Head of Frobisher Bay, Baffin Land.

Ulrich, Proc. U. S. Nat. Mus., XXII, 1900, p. 162, pl. 13, figs.

46192. Cyrtodonta subovata Ulrich. Cotypes.

Stones River (Ord.). High Bridge, Kentucky. 46849.

Black River (Ord.). St. Paul and Cannon Falls, Minne-46851. 46852. sota; Mercer County, Kentucky.

> Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 536, pl. 39, figs. 28-33, 45.

= Cyrtodonta huronensis.

46193. Cyrtodonta tenella (Ulrich).

Cotypes. Black River (Ord.). Six miles south of Cannon Falls, Minnesota.

> Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 546, pl. 40, figs. 15-19.

See Cypricardites tenellus.

45783. Cyrtolites carinatus Miller.

Plesiotypes.

Utica (Ord.). Newport, Kentucky.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 862, pl. 62, figs. 50-52.

Cyrtolites cristatus Safford. 45949 Cotypes.

Trenton (Ord.). Nashville, Jackson County, and Lindto slevs Hill, near Lebanon, Tennessee. 45951.

Safford, Geol. Tenn., 1867, p. 289.

=Oxydiscus cristatus.

45784. Cyrtolites dilatatus Ulrich and Scofield. Cotype. Black River (Ord.). Near Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 865, pl. 62, figs. 24-26.

45785. Cyrtolites disjunctus Ulrich and Scofield. Holotype. Richmond (Ord.). Near Spring Valley, Minnesota.

> Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 864, pl. 62, figs. 48, 49.

45793. Cyrtolites nitidulus Ulrich. Holotype.

Trenton (Ord.). Covington, Kentucky.

Ulrich, Journ, Cincinnati Soc. Nat. Hist., II, 1879, p. 12, pl. 7, figs. 7, 7a.

=Cyrtolitina nitidula.

17898. Cyrtolites ornatus Conrad? Plesiotype.

> Black River (Ord.). Three miles above Fort Snelling, Minnesota.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, pl. 2B., fig. 1.

45786. Cyrtolites ornatus Conrad.

Plesiotypes.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 860, pl. 62, figs. 27, 28.

45787. Cyrtolites ornatus minor Ulrich and Scofield. Holotype.
Trenton (Ord.). Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 861, pl. 62, figs. 30, 31.

45788. Cyrtolites parvus Ulrich.

Holotype.

Trenton (Ord.). Covington, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 864, pl. 62, figs. 45-47.

45789. Cyrtolites retrorsus Ulrich.

Cotypes.

45790. Trenton (Ord.). Hartsville, Tennessee, and one mile south of Burgin, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 861, pl. 62, figs. 32-37.

45791. Cyrtolites retrorsus fillmorensis Ulrich and Scofield.

Cotypes.

Black River (Ord.). Near Fountain, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, pl. 62, figs. 38, 39.

17363. Cyrtolites sinuatus Hall and Whitfield. Holotype.
Upper Pogonip (Ord.). Pogonip Mountain, White Pine
District, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 237, pl. 1, figs. 23-24.—Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 84.

45792. Cyrtolites subplanus Ulrich.

Cotypes.

Trenton (Ord.). Nashville, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 862, pl. 62, figs. 40-44.

45793. Cyrtolitina nitidula (Ulrich).

Plesiotypes.

Trenton (Ord.). Covington, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 866, pl. 62, figs. 53-55.

See Cyrtolites nitidulus.

41952. Cyrtometopus scofieldi Clarke.

Holotype.

Stones River (Ord.). Minneapolis, Minnesota.

Clarke, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 735, fig. 55.

45794. Cyrtospira bicurvata Ulrich.

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Holot

Stones River (Ord.). High Bridge, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, P 1897, p. 1074, pl. 81, figs. 21, 22.

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- 46053. Cyrtospira tortilis Ulrich.

  Stones River (Ord.). Murfreesboro, Tennessee.

  Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., I
  - 1897, p. 1074, pl. 81, figs. 24, 25.

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Trenton (Ord.). Wykoff, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist., Surv. Min
Rept., III, Pt. II, 1897, p. 1074, pl. 81, fig. 23.

45795. Cyrtospira wykoffensis Ulrich and Scofield.

14546. Cysteophyllum americanum arcticum Meek. (
Base of Upper Devonian. Onion River, Mackenz
Basin, Canada.

Meek, Trans. Chicago Acad. Sci., I, 1868, p. 80, pl. 11, 1

- 43396. Cystodictya americana Ulrich.

  Keokuk (Miss.). Kings Mountain Tunnel, Kent
  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 494, pl. 76, figs.
- 43651. Cystodictya gilberti (Meek). Ple:
  Onondaga (Dev.). Falls of the Ohio.
  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 320, pl. 43, fig.:
  See Stictopora gilberti.
- 43399. Cystodictya hamiltonensis Ulrich. H Middle Devonian. Buffalo, Iowa.

  Ulrich, Geol. Surv. Ill.. VIII, 1890, p. 493, pl. 42, fig fig. 1.
- 43652. Cystodictya lineata Ulrich. Cotypes and figured Keokuk (Miss.). Kings Mountain Tunnel, Kent Ulrich, Journ. Cincinnati Soc. Nat. Hist., VII, 1884, p. figs. 4-4c.
- 43398. Cystodictya lineata st. ludovicii Ulrich.
  St. Louis (Miss.). St. Louis, Missouri.
  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 492.
- 43650. Cystodictya occellata Ulrich. Holotype and

Keokuk? (Miss.). Somerset, Kentucky.Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. figs. 3-3a.

- 43397. Cystodictya pustulosa Ulrich.

  Keokuk (Miss.). Kings Mountain, Kentucky.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 495, pl. 76, figs.
- 43497. Cystodictya zigzag Ulrich.

  Waverly (Miss.). Richfield, Ohio.

  Ulrich, Bull. Denison Univ., IV, 1888, p. 81, pl. 13, fig.

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107143. **Cythara gibba** Guppy.
107144. Oligocene. Vendryes, Jamaica, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 306, pl. 27, fig. 9.

Oligocene. Vendryes, Jamaica, West Indies.

Dall, Proc. U. S. Nat. Mus., XIX, 1896, p. 306, pl. 27, fig. 5.

163985. **Cythara metria** Dall. Holotype. Pliocene. Shell Creek, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III -. VI, 1903, pl.

163993. Cythara micromeris Dall. Holotype.
Pliocene. Shell Creek, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI. 1903, pl. 60, fig. 16.

107087. Cythara mucronata Guppy. Holotype. Oligocene. Vendryes, Jamaica, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 306, pl. 27, fig. 6.

107088. Cythara obtusa Guppy. Holotype. Oligocene. Vendryes, Jamaica, West Indies. Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 306, pl. 27, fig. 7.

97338. **Cythara terminula** Dall. Cotypes. Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 38, pl. 2, fig. 5.

35411. Cythere burnsi Ulrich and Bassler. Cotypes.
Calvert (Miocene). Plum Point, Maryland.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 103, pl. 36, figs. 34-39.

35412. Cythere calverti Ulrich and Bassler. Holotype. Calvert (Miocene). Plum Point, Maryland.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 100, pl. 38, figs. 11-13.

35413. Cythere clarkana Ulrich and Bassler. Cotypes. Calvert (Miocene). Plum Point, Maryland.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 98, pl. 35, figs. 1-10.

35414. Cythere clarkana minuscula Ulrich and Bassler. Cotypes. Calvert (Miocene). Plum Point, Maryland.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 99, pl. 35, figs. 11-14.

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35415.	Cythere dorsicornis Ulrich and Bassler.  Calvert (Miocene). Plum Point, Maryland.  Ulrich and Bassler, Maryland Geol. Surv., Miocene, 19
	pl. 36, fig. 16.
35416.	Cythere dorsicornis bicornis Ulrich and Bassler. I Choptank (Miocene). Pawpaw Point, Maryland
	Ulrich and Bassler, Maryland Geol. Surv., Miocene, 19 pl. 38, figs. 32-33.
35417-	Cythere evax Ulrich and Bassler. Calvert (Miocene). Plum Point, Maryland.
	Ulrich and Bassler, Maryland Geol. Surv., Miocene, 19 pl. 36, figs. 6-8.
35418.	Cythere evax oblongula Ulrich and Bassler. Calvert (Miocene). Plum Point, Maryland.
	Ulrich and Bassler, Maryland Geol. Surv., Miocene, 19 pl. 36, figs. 9, 10.
35419.	Cythere exanthemata Ulrich and Bassler. Calvert (Miocene). Plum Point, Maryland.
	Ulrich and Bassler, Maryland Geol. Surv., Miocene, 19 pl. 36, figs. 1-5.
35420.	Cythere francisca Ulrich and Bassler.  Choptank (Miocene). Peach Blossom Creek, the southwest of Easton, Maryland.
	Ulrich and Bassler, Maryland Geol. Surv., Miocene, 19 pl. 38, figs. 19-21.
35421.	Cythere inæquivalvis Ulrich and Bassler. Calvert (Miocene). Plum Point, Maryland.
	Ulrich and Bassler, Maryland Geol. Surv., Miocene, 10 pl. 35, figs. 15-17.
35422.	Cythere lienenklausi Ulrich and Bassler.  Calvert (Miocene). Plum Point, Maryland.
	Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1 pl. 38, fig. 31.
35423-	Cythere martini Ulrich and Bassler. Calvert (Miocene). Plum Point, Maryland.
	Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1 pl. 36, figs. 11-15.
41803.	Cythere marylandica Ulrich.  Eocene. Sunnyside, Maryland.

35424. Cythere micula Ulrich and Bassler.
Calvert (Miocene). Plum Point, Maryland.
Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1
pl. 36, figs. 18-20.

16-18.

Ulrich, Maryland Geol. Surv., Eocene, 1901, p. 119,

21708. Cythere nebrascensis Geinitz. Plesiotype.

Permian. Military Crossing of the Big Wichita, Baylor
County, Texas.

White, Bull. No. 77, U. S. Geol. Surv., 1891, p. 30, pl. 4, fig. 20.

35425. Cythere nitidula Ulrich and Bassler. Cotypes. Calvert (Miocene). Plum Point, Maryland.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 107, pl. 36, figs. 21-23.

25426. Cythere nitidula calvertensis Ulrich and Bassler. Cotypes. Calvert (Miocene). Plum Point, Maryland.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 108, pl. 36, figs. 24, 25.

35427. Cythere paucipunctata Ulrich and Bassler. Holotype. Choptank (Miocene). Peach Blossom Creek, three miles southwest of Easton, Maryland.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 105, pl. 38, figs. 7-9.

35428. Cythere planibasalis Ulrich and Bassler. Holotype. Chesapeake (Miocene). James River, Virginia.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 99, pl. 38, figs. 1-3.

35429. Cythere plebeia Ulrich and Bassler. Cotypes. Calvert (Miocene). Plum Point, Maryland.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 102, pl. 35, figs. 20-29.

35430. Cythere plebeia capax Ulrich and Bassler. Cotypes. Calvert (Miocene). Plum Point, Maryland.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 103, pl. 35, figs. 30−33.

35431. Cythere plebeia modica Ulrich and Bassler. Cotypes. Calvert (Miocene). Plum Point, Maryland.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 103, pl. 35, figs. 18, 19.

35432. Cythere porcella Ulrich and Bassler. Cotypes. Calvert (Miocene). Plum Point, Maryland.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 106, pl. 36, figs. 26-33.

35433. Cythere producta Ulrich and Bassler. Holotype. Calvert (Miocene). Plum Point, Maryland.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 115, pl. 36, fig. 17; pl. 38, figs. 28-30.

- 35434. Cythere punctistriata Ulrich and Bassler. Cotypes.

  Choptank (Miocene) Peach Blosom Creek three miles
- 35435. Choptank (Miocene). Peach Blossom Creek, three miles southwest of Easton, Marvland.

Calvert (Miocene). Church Hill, Maryland.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 108, pl. 38, figs. 22-24.

35436. Cythere rugipunctata Ulrich and Bassler. Holotype. Chesapeake (Miocene). James River, Virginia.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 118, pl. 38, figs. 16, 17.

35437. Cythere (?) shattucki Ulrich and Bassler. Holotype. Choptank (Miocene). Pawpaw Point, Maryland.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 121, pl. 38, fig. 10.

35438. Cythere spiniplicata Ulrich and Bassler. Holotype. Calvert (Miocene). Plum Point, Maryland.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 120, pl. 38, fig. 18.

35439. **Cythere subovalis** Ulrich and Bassler. Holotype. Choptank (Miocene). Pawpaw Point, Maryland.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 111, pl. 38, figs. 14, 15.

35440. Cythere toumeyi Ulrich and Bassler. Cotypes.

Choptank (Miocene) Peach Blossom Creek three miles

Choptank (Miocene). Peach Blossom Creek, three miles southwest of Easton, Maryland.

Chesapeake (Miocene). Yorktown, Virginia.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 105, pl. 38, figs. 4–6.

35442. **Cythere vaughani** Ulrich and Bassler. Holotype. Chesapeake (Miocene). James River, Virginia.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 109, pl. 38, figs. 25-27.

114754. **Cytherea cæsarina** Dall. Holotype. Chipola (Oligocene). Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1275, pl. 53, fig. 5.

115552. Cytherea (Circe) carbasea Guppy. Holotype.
Miocene. Jamaica, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 292, pl. 18, fig. 13.

341. Cytherea deweyi Meek and Hayden. Cotypes.

Montana (Cret.). Moreau River, South Dakota, and

Yellowstone River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 83.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 83.

— Çallista (Dosiniopsis) deweyi.

63337. Cytherea (Artena) glyptoconcha Dall. Holotype. Oligocene. Ballast Point, Tampa Bay, Florida.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1277, pl. 55, fig. 24.

15549. Cytherea juncea Guppy.

Holotype.

Miocene. Cumana, Venezuela.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 582, pl. 26, fig. 13.

9853. Cytherea leonensis Conrad.

Holotype.

Washita (Lower Cret.). Leon Springs, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 153, pl. 6, fig. 1.

343. Cytherea nebrascensis Meek and Hayden. Cotypes. Montana (Cret.). Cheyenne and Moreau rivers, South Dakota.

> Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 83. = Callista (Dosiniopsis) nebrascensis.

9905. Cytherea nuttali Conrad.

Holotype.

Eocene. East of Frontera, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 162, pl. 4, fig. 5.

176. Cytherea owenana Meek and Hayden. Holotype. Fox Hills (Cret.). Mouth of Judith River, Montana.

> Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 273.

= Callista owenana.

418. Cytherea pellucida Meek and Hayden.

Holotype and paratypes.

Fort Pierre (Cret.). Missouri River, Montana, two hundred miles above Milk River.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p.

= Callista? pellucida.

15550. Cytherea (Callista) planivieta Guppy.

15551.

Holotype.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 292, pl. 18,

Jamaica, British West Indies.

fig. 3.

20236. Cytherea (Artena) shepardi Dall. Holotype. Oligocene. Near Tampa, Florida.

> Dall, Trans. Wagner Free Inst. Sci. Phila., 111, Pt. VI, 1903, p. 1278, pl. 55, fig. 16.

p9233. Cytherea tarquinia (Dall).

Holotype.

Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1274.

See Venus tarquinia.

9850. Cytherea texana Conrad. Holotype.
Washita (Lower Cret.). Between El Paso and Frontera,
Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 153, pl. 6, fig. 2.

136468. Cytherea (Ventricola) ucuttana Dall. Holotype.
Red Bluff (Eocene). Ucutta Creek, Clarke County, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1276, pl. 57, fig. 14.

109234. Cytherea willcoxi Dall.

Pliocene. Caloosahatchie River, near site of old Fort
Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci. Fhila., III, Pt. VI, 1903, p. 1276, pl. 53, fig. 3.

35451. Cythereis alaris Ulrich and Bassler. Holotype. Chesapeake (Miocene). James River, Virginia.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 123, pl. 38, figs. 34-36.

41801. Cythereis bassleri Ulrich. Cotypes. Eocene. Upper Marlboro, Maryland.

Ulrich, Maryland Geol. Surv., Eocene, 1901, p. 120, pl. 16, figs. 19-21.

35452. Cythereis cornuta americana Ulrich and Bassler. Cotypes Calvert (Miocene). Plum Point, Maryland.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 122, pl. 37, figs. 29-33.

4:500. Cytherella marlboroensis Ulrich. Cotypes Eocene. Upper Marlboro, Maryland.

Ulrich, Maryland Geol. Surv., Eocene, 1901, p. 117, pl. 16, figs. 9-13.

Cytherella ovatiformis Ulrich. Cotypes. Chester (Miss.). Grayson Springs Station, Kentucky. Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 17, figs. 3, 4a-c.

Cytherella? rugosa Jones. Plesiotypes.
Trenton Ord.\. Near Cannon Falls, Minnesota.
Urich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II.
1891, p. 686, pl. 43, figs. 21-24.

Cytherella? rugosa arcta Ulrich. Holotype.
Trenton Ord. Near Cannon Falls, Minnesota.
Trich Geol. and Nat. Hist. Surv. Minn., Final Rept., III. Pt. II.

15st p 6% pl 4; fig. 25.

41807. Cytherella submarginata Ulrich. Holotype.

Eocene. Upper Marlboro, Maryland.

Ulrich, Maryland Geol. Surv., Eocene, 1901, p. 118, pl. 16, figs. 14, 15.

41808. Cytherella? subrotunda Ulrich. Holotype. Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 685, pl. 44, fig. 43.

35444. Cytheridea (?) chesapeakensis Ulrich and Bassler.

Holotype.

Calvert (Miocene.) Plum Point, Maryland.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 125, pl. 37, fig. 9.

41804. Cytheridea perarcuata Ulrich. Holotype. Eocene. Potomac Park, Maryland.

Ulrich, Maryland Geol. Surv., Eocene, 1901, p. 121, pl. 16, figs.

35445. **Cytheridea subovata** Ulrich and Bassler. Cotypes. Calvert (Miocene). Plum Point, Maryland.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 124 pl. 37, figs. 1-8.

35446. Cytherideis ashermani Ulrich and Bassler. Cotypes. Calvert (Miocene). Plum Point, Maryland.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 126, pl. 37, figs. 10-16.

35447. Cytherideis cylindrica Ulrich and Bassler. Holotype. Calvert (Miocene). Plum Point, Maryland.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 126, pl. 37, fig. 17.

35448. Cytherideis longula Ulrich and Bassler. Cotypes. Calvert (Miocene). Plum Point, Maryland.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 128, pl. 37, figs. 21-27.

35449. Cytherideis semicircularis Ulrich and Bassler. Cotypes. Calvert (Miocene). Plum Point, Maryland.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 127, pl. 37, figs. 18-20.

35450. Cytherideis subæqualis Ulrich and Bassler. Holotype. Calvert (Miocene). Plum Point, Maryland.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 127, pl. 37, fig. 28.

35443. Cytheropteron nodosum Ulrich and Bassler. Holotype. Chesapeake (Miocene). James River, Virginia.

Ulrich and Bassler, Maryland Geol. Surv., Miocene, 1904, p. 129, pl. 38, figs. 37-40.

26275 Dactyloidites asteroides (Fitch). Plesiotypes. to Lower Cambrian. Middle Granville, New York.

26280. Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 605, pl. 58.
fig. 1; Mon. XXX, U. S. Geol. Surv., 1898, p. 41, text fig.
15, pls. 24-26; pl. 27, figs. 3, 6; pl. 28, fig. 5.

20136. Dalliconcha ensiformis (Conrad). Plesiotype. Ripley (Cret.). Alabama.

White, Proc. Acad. Nat. Sci. Phila., for 1887, p. 37, pl. 2, fig. 6. = Gervilliopsis ensiformis.

20135. Dalliconcha invaginata White. Cotypes. Washita (Lower Cret.). Two miles north of Fort Worth, Texas.

White, Proc. Acad. Nat. Sci. Phila., for 1887, p. 35, pl. 2, figs. 4.5. = Gervilliopsis invaginata.

34116. Dalmanella subcarinata (Hall). Plesiotypes. Helderbergian (Lower Dev.). Atoka quadrangle, Indian Territory.

Girty, Nineteenth Ann. Rept. U. S. Geol. Surv., 1900, p. 561, pl. 70, figs, 1a-1g.

Dalmania paituna Hartt and Rathbun. See Dalmanites paituna.

23885. Dalmanites australis Clarke. Plastotype.
Middle Devonian. Rio Maecuru, Brazil.

Clarke, Archivos do Mus. Rio de Janeiro, IX, 1890, p. 29, pl. 2, figs. 11, 13.

23884. Dalmanites gemellus Clarke. Plastotype.
Middle Devonian. Rio Maecuru, Brazil.

Clarke, Archivos do Mus. Rio de Janeiro, IX, 1890, p. 38, pl. 2, fig. 14.

28170. Dalmanites (Pterygometopus) goodridgii Schuchert.

Cotypes. Trenton (Ord.). Head of Frobisher Bay, Baffin Land.
Schuchert, Proc. U. S. Nat. Mus., XXII, 1900, p. 174, pl. 12, figs. 5, 6.

13993. Dalmanites meeki Walcott. Cotypes. 13994. Middle Devonian. Three miles south of Piñon Pass. 13995. Piñon Range, and Eureka District, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 48 pl. 1, figs. 11, 11a (as Dalmanites sp. undet.).—Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 207, pl. 17, figs. 5-5c.

= Hausmannia meeki.

24343. Dalmanites paituna Hartt and Rathbun. Cotypes Middle Devonian. Ereré, Para, Brazil.

Hartt and Rathbun, Ann. Lyceum Nat. Hist. N. Y., XI, 1875, p. 111.

23875. Dalmanites (Cryphaeus) paituna Hartt and Rathbun.

Cotype.

Middle Devonian. Rio Maecuru, Brazil.

Clarke, Archivos do Mus. Rio de Janeiro, IX, 1890, p. 39, pl. 1, fig. 13.

30189. Daonella böchiformis Hyatt.

Cotypes.

Triassic. Sailors Canyon, California.

Hyatt, Bull. Geol. Soc. Amer., V, 1894, p. 415.

30191. Daonella cardinoides Hyatt.

Cotypes.

Triassic. Sailors Canyon, California.

Hyatt, Bull. Geol. Soc. Amer., V, 1894, p. 416.

30190. Daonella (?) subjecta Hyatt.

Cotypes.

Triassic. Sailors Canyon, California.

Hyatt, Bull. Geol. Soc. Amer., V, 1894, p. 415.

113176. Daphnella cingulata Dall.

Holotype.

Pliocene. Shell Creek, De Soto County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 38, pl. 2, fig. 3.

97340. Daphnella elata Dall.

Holotype.

Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 224, pl. 21, fig. 1.

97341. Daphnella modesta Dall.

Holotype.

Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 39, pl. 2, fig. 4.

43187. Dekayella foliacea Ulrich and Bassler. Holotype and figured sections.

Trenton (Ord.). Lexington, Kentucky.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 28, pl. 7, figs. 10-12.

43659. Dekayella obscura Ulrich. Cotypes and figured sections. Utica (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 89, pl. 1, figs. 4-4b.

43528. **Dekayella prænuntia** Ulrich. Holotype and figured sections. Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 270, pl. 23, fig. 43.

43530. Dekayella prænuntia echinata Ulrich. Cotypes and figured sections.

Black River (Ord.). Near Fountain, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 271, pl. 23, figs. 32-38

43531. Dekayella prænuntia multipora Ulrich. Holotype and figured sections.

Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 272, pl. 23, figs. 44-47.

43532. Dekayella prænuntia nævigera Ulrich. Holotype. Black River (Ord.). Lanesboro, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 271.

43529. Dekayella prænuntia simplex Ulrich. Cotypes and figured sections.

Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 271, pl. 23, figs. 39-42.

43655. **Dekayia appressa** Ulrich. Holotype and figured sections. Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 152, pl. 6, figs. 7, 7a, 7b.

43307. Dekayia devonica Ulrich. Cotypes and figured sections.

43306. Onondaga (Dev.). Falls of the Ohio.

Hamilton (Dev.). Eighteen Mile Creek, New York.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 416, pl. 45, figs. 5-5d.

43:55. Dekayia multispinosa Ulrich. Holotype and figured sections.

Lorraine Ord. 1. Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 154, pl. 6, figs. 8, 8a.

Let's. Dekayia paupera Ulrich. Holotype and figured sections.

Lorraine Ord. Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 153, pl. 6, figs. 10, 10a.

= Heterotrypa paupera.

1355. Dekayia pelliculata Ulrich. Figured section of holotype. Lorraine Ord. Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI. 1883, p. 150, pl. 6, figs. 9, 9a.

43660. Dekayia trentonensis Ulrich.

Trenton Ord. Burgin, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883. p. 151, pl. 6, figs. 7, 7a, 7b.

= Dekayella trentonensis.

17924. Delthyris eruteines Owen.

Cotypes.

Middle Devonian. Pine Creek, Iowa.

Owen, Rept. Geol. Expl. Iowa, Wis., and III., 1844, pl. ii (12), fig. 9.

=Spirifer euryteines.

42103. Dendrocrinus? curtus Ulrich.

Holotype.

Utica (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 18, pl. 7, fig. 14.

= Merocrinus curtus.

158468. Dendrophyllia lisbonensis Vaughan.

Holotype.

Lisbon (Eocene). Lisbon, Alabama.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 191, pl. 22, figs. 20-20c.

158472. Dendrophyllia striata Vaughan.

Holotype.

Lower Claiborne (Eocene). Mount Lebanon, Louisiana.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 191, pl. 22, figs. 19-19b.

112739. Dentalium agile oleacinum Dall.

Cotypes.

Pliocene. Shell Creek, De Soto County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 441.

112745. Dentalium caduloide Dall.

Holotype.

Miocene. Near St. Marys, Maryland.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 442, pl. 23, fig. 25.

23063. Dentalium californicum Stanton. Holotype and paratypes. Knoxville (Lower Cret.). Five miles north of Paskenta, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 62, pl. 12, fig. 3.

112741. Dentalium caloosaënse Dall.

Holotype.

Pliocene. Shell Creek, De Soto County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 441, pl. 23, fig. 24.

8473. Dentalium canna White.

Cotypes.

Upper Carboniferous. Near Salt Lake, New Mexico, and Relief Spring, Arizona.

White, Prelim. Rept. U. S. Geogr. Surv., W. 100th Merid., 1874, p. 23; Rept. U. S. Geogr. Surv., W. 100th Merid., IV, Pt. I, 1877, p. 156, pl. 12, figs. 6a, 6b.

296. Dentalium fragilis Meek and Hayden.

Cotypes.

Montana (Cret.). Yellowstone River, near Miles City, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 69. = Dentalium gracile.

296. Dentalium gracile Hall and Meek.

Plesiotypes.

Fort Pierre (Cret.). Yellowstone River, near Miles City, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 266, pl. 18, figs. 13a-d.

See Dentalium fragilis.

12299. Dentalium gracile Hall and Meek
Fort Pierre (Cret.). Cheyenne River, near Rapid Creek,
Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 438, pl. 12, fig. 26.

4270. Dentalium komooksense Meek. Holotype.
Nanaimo (Cret.). Nanaimo?, Vancouver Island.

Meek, Bull. U. S. Geol. and Geogr. Surv. Terr., II, 1876, p. 364, pl. 3, fig. 6.

= Dentalium nanaimoense.

4270. Dentalium nanaimoensis Meek. Holotype.
Nanaimo (Cret.). Nanaimo, Vancouver Island.

Meek, Trans. Albany Inst., IV, 1857, p. 44.

See Dentalium komooksense.

311. Dentalium pauperculum Meek and Hayden. Holotype. Fox Hills (Cret.). Moreau River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1860, p. 178. = Entalis? paupercula.

Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 442, pl. 15, fig. 5.

677. **Dentalium? subquadratum Meek.** Cotypes. Jurassic. Red Buttes, North Platte, Wyoming.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., 1860, p. 311; Pal. Upp. Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 111, text fig.—Meek, Rept. Expl. Great Basin, Utah, Simpson, 1876, p. 357, pl. 3, figs. 1a-c.

Depranella. See Drepanella.

24358. Derbya correana Derby.

Upper Carboniferous. Itaituba, Brazil.

Plesiotypes.

Hall and Clarke, Nat. Hist. New York, Pal. VIII, Pt. I, 1892, pl. 20, figs. 10, 11.

=Orthotetes correana.

45561. Derbya kaskaskiensis McChesney. Plesiotype. Chester (Miss.). One mile west of Montgomery Switch, Caldwell County, Kentucky.

Hall and Clarke, Nat. Hist. New York, Pal. VIII, Pt. I, 1892. pl. 11B, fig. 6.

=Orthotetes kaskaskiensis.

23087. Desmoceras californicum Stanton. Cotypes. Knoxville (Lower Cret.). Three miles north of Paskenta. California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 76, pl. 15, figs. 6, 7.

43293. Diamesopora communis Ulrich. Cotypes and figured sections.

Utica (Ord.). Cincinnati, Ohio.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 469, pl. 39, fig. 3a; pl. 41, figs. 5-5b.

=Cœloclema commune.

43294. Diamesopora trentonensis Ulrich. Cotypes. Trenton (Ord.). Near Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 330, pl. 28, fig. 14.

=Cœloclema trentonense.

43292. Diamesopora vaupeli Ulrich. Cotypes and figured sections. Utica (Ord.). Cincinnati, Ohio.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 468, pl. 39, figs. 3, 3b; pl. 41, figs. 4, 4c.

=Cœloclema alternatum.

24341. Diaphorostoma darwini Clarke.

Cotype.

Middle Devonian. Rio Maecuru, Brazil.

Clarke, Archivos do Mus. Rio de Janeiro, X, 1899, p. 32, pl. 4, fig. 19.

24339. Diaphorostoma furmanianum (Hartt and Rathbun).

Plesiotypes.

Middle Devonian. Ereré, Brazil.

Clarke, Archivos do Mus. Rio de Janeiro, X, 1899, p. 32, pl. 4, figs. 11, 12, 13.

See Holopea furmaniana.

43266. Diastoporina flabellata Ulrich.
Trenton (Ord.). Cannon Falls, Minnesota.

Holotype.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 122, pl. 2, figs. 2, 3; Journ. Cincinnati Soc. Nat. Hist., XII, 1890, p. 178, figs. 5a-b.

24567. Dicellocephalus? angustifrons Walcott. Cotypes. Upper Cambrian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 42, pl. 10, figs. 1-1b.

24568. Dicellocephalus bilobatus Hall and Whitfield. Cotypes. Upper Cambrian. Eureka District, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 226, pl. 2, fig. 36.—Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 40.

15450. Dicellocephalus? expansus Walcott. Holotype. Middle Cambrian. Prospect Ridge, Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 45, pl. 9, fig. 19. = Olenoides? expansus,

24563. Dicellocephalus finalis Walcott. Cotypes.
Upper Pogonip (Ord.). Ridge east of Hamburg Ridge,
Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 89, pl. 12, figs. 12, 12a, 22.

24569. Dicellocephalus flabellifer Hall and Whitfield. Cotypes.

Upper Cambrian. West side of Pogonip Mountain, White
Pine District, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 227, pl. 2, figs. 29, 30.

8563. Dicellocephalus? flagricaudus White. Cotypes. 15452. Middle Cambrian. Schellbourne, Schell Creek Range, Nevada.

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 1874.
p. 12; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I.
1877, p. 60, pl. 3, figs. 8a, 8b.

= Zacanthoides flagricaudus. See Olenoides? flagricaudus.

15447. Dicellocephalus? gothicus Hall and Whitfield. Holotype.

Middle Cambrian. Canyon above Calls Fort, Wahsatch
Range, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 242, pl. 1, fig. 36.

=Olenoides wahsatchensis.

See Dicellocephalus wahsatchensis.

24564. Dicellocephalus inexpectans Walcott. Cotypes.

Lower Pogonip (Ord.). Ridge east of Hamburg Ridge,

Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 90, pl. 1, fig. 10.

24566. Dicellocephalus iole Walcott. Cotypes.
Upper Cambrian. Near Bullwhacker Mine, Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol, Surv., 1884, p. 43, pl. 10, fig. 19.

17870. Dicellocephalus iowensis Owen. Cotypes.

Middle Cambrian. Below mouth of Miniskah River.

Minnesota.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, p. 575, pl. 1; fig. 4.

= Crepicephalus? iowensis.

24565. Dicellocephalus marica Walcott.
Upper Cambrian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol, Surv., 1884, p. 44, pl. 10, fig. 15

17872. Dicellocephalus miniscaensis Owen. Cotype.
Middle Cambrian. Near mouth of Miniskah River, Minnesota.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, p. 574, pl. 1A, fig. 5.

=Ptychaspis miniscaensis.

17863. Dicellocephalus minnesotensis Owen. Cotypes.
Upper Cambrian. Lake St. Croix, above Stillwater, Minnesota.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, p. 574, pl. 1, figs. 1, 2, 10.

See Dicellocephalus pepinensis.

24640. Dicellocephalus multicinctus Hall and Whitfield.

Holotype.

Upper Cambrian. Eureka District, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 226, pl. 2, fig. 37.

24607. Dicellocephalus nasutus Walcott. Cotypes.
Middle Cambrian. New York Canyon, Eureka District,
Nevada.

Walcott, Mon. VIII, U. S. Geci. Surv., 1884, p. 40, pl. 10, fig. 15. = Anomocare nasutus.

24659. Dicellocephalus osceola Hall. Plesiotype.
Upper Cambrian. North of Dunderberg Mine, Eureka
District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 7884, p. 40, pl. 9, fig. 25.

17867. Dicellocephalus pepinensis Owen. Cotypes.
17868. Upper Cambrian. La Grange Mountain, head of Lake
Pepin, Minnesota.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, p. 574, pl. 1, figs. 9a, 9b; pl. 1A, fig. 7. (Also pl. 1, fig. 10 as D. minnesotensis.)

15448. Dicellocephalus quadriceps Hall and Whitfield. Cotypes.

Middle Cambrian. Ute Peak, Wahsatch Range, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 240, pl. 1, figs. 37-40.

=Olenoides quadriceps.

15449. Dicellocephalus quadriceps Hall and Whitfield.

Plesiotypes.

Middle Cambrian, Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 45, pl. 9, fig. 24. = Olenoides quadriceps.

24616. Dicellocephalus richmondensis Walcott. Cotypes.
Middle Cambrian. New York Canyon, Eureka District,
Newada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 41, pl. 10, fig. 7. = Ptychoparia richmondensis.

15447. Dicellocephalus wahsatchensis Hall and Whitfield.

Cotypes.

Middle Cambrian. Canyon above Calls Fort, Wahsatch Range, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th, Par. IV, Pt. II, 1877, p. 241, pl. 1, fig. 35.

=Olenoides wahsatchensis.

See Dicellocephalus gothicus.

1025. Dicellomus nanus (Meek and Hayden). Cotypes.
Upper Cambrian. Central portions of Black Hills, South
Dakota.

Walcott, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 447, pl. 60, figs. 3b, 3d.

See Obolella nana.

35209. Dicellomus nanus (Meek and Hayden). Plesiotypes. 35210. Gallatin (Upper Cambrian). Gallatin Range, Yellowstone National Park, and Little Rocky Mountains, Montana.

Walcott, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 447, pl. 60, figs. 3, 3a, 3c.

See Obolella nana.

35211. Dicellomus politus (Hall).

Plesiotypes.

Middle Cambrian. Wisconsin.

Walcott, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 446, pl. 60, figs. 4, 4a.

158300. Dichocœnia alabamensis Vaughan. Holotype. Midway (Eocene). Prairie Creek, Alabama.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 139, pl. 15, figs. 4-4c.

35092. Dichocrinus inornatus Wachsmuth and Springer.

Plesiotype.

Kinderhook (Miss.). Quarry, Marshall County, Iowa.

Grabau, Amer. Journ. Sci. (4), XVI, 1903, p. 297, figs. 9, 10 on p. 298.

43749. Dichotrypa elegans Ulrich. Cotypes. St. Louis (Miss.). Elizabethtown, Kentucky.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 500, pl. 76, figs. 8, 8b, 8c, 8d.

43387. Dichotrypa foliata Ulrich. Cotypes.

Middle Devonian. Buffalo, Iowa.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 499, pl. 42, figs. 2-2g.

44088. Dichotrypa grandis Ulrich. Figured sections of holotype. Niagaran (Sil.). Near Wilmington, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 498, pl. 42, figs. 1b-1e.

43748. Dichotrypa intermedia Ulrich. Figured sections of cotypes. St. Louis (Miss.). Alton, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 500, pl. 76, figs. 9b, 9c.

43386. Dichotrypa lyroides Ulrich.
St. Louis (Miss.). Southern Kentucky.
Ulrich, Geol. Surv. Ill., VIII, 1890, p. 502, pl. 77, figs. 2-2b.

41366. Dicranella bicornis Ulrich.

Cotypes.

Black River (Ord.). Minneapolis.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 665, pl. 44, fig. 26; pl. 46, figs. 39, 40.

41368. Dicranella marginata Ulrich. Holotype.

Black River (Ord.). Fountain, Minnesota.

Ulrich Geol and Nat. Hist Surv. Minn. Final Rept. III. Pt. II.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 666, pl. 44, figs. 27, 28.

41367. Dicranella? simplex Ulrich.

Black River (Ord.). Fountain, Minnesota.

Holotype.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 666, pl. 44, figs. 24, 25; pl. 46, fig. 42.

41369. Dicranella spinosa Ulrich. Holotype. Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 665, pl. 44, fig. 23; pl. 46, fig. 41.

44098 Dicranopora lata Ulrich. Cotypes. Richmond (Ord.). Clarksville, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 166, pl. 6, figs. 16, 16a.

= Rhinidictya lata.

43707. Dicranopora trentonensis Ulrich. • Holotype. Stones River (Ord.). Lebanon, Tennessee.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 167, pl. 6, figs. 15, 15a.

= Rhinidictya trentonensis.

25348. Dictyophytra (?) walcotti Rauff. Plesiotype. Utica (Ord.). Near Holland Patent, New York.

Rauff, Palaeontographica, XL, 1894, p. 249, pl. 4, figs 1, 2.

38146. Dieconeura arcuata Scudder. Holoty
Upper Coal Measures. Mazon Creek, Grundy Coui
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1885, p. 336, pl. 3 fig. 4; Foss. Insects N. America, I, 1890, p. 300, pl. 16, fig. 4.

38156. Dieconeura rigida Scudder. Holotype.
Upper Coal Measures. Campbells Ledge, near Pittston.
Pennsylvania.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1885, p. 336, pl. 29, fig. 10; Foss. Insects N. America, I, 1890, p. 300, pl. 16, fig. 4.

35358. Dielasma bovidens (Morton)? Plesiotype.

Upper Carboniferous. Rock Creek, Elk Mountains, Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 409, pl. 7, figs. 11, 11a.

See Terebratula bovidens.

35179. Dielasma utah (Hall and Whitfield). Holotype and plesiotype.

Madison (Miss.). Crowfoot Ridge, Gallatin Range, Yellowstone National Park.

Waverly (Miss.). Cottonwood divide, Wahsatch Range, Utah.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 544, pl. 69, figs. 6a, 6b, 6c.

See Terebratula utah.

Dikellocephalus. See Dicellocephalus.

Upper Oligocene. Pointapier, Trinidad, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 323, pl. 27, fig. 2.

5947. Dillwynella naticoides (Lea). Plesiotypes. Claibornian (Eocene). Claiborne, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892. p. 418, pl. 18, fig. 3.

Cotypes.

41641. Dilobella typa Ulrich.

Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II. 1894, p. 673, pl. 46, figs. 30-34.

4797. Diloma (Chlorodiloma) ruderata Dall. Holotype.

Miocene. Penjinsk Gulf, Siberia.

Dall, Proc. U. S. Nat. Mus., XVI, 1893, p. 476, pl. 56, fig. 3.

113799. Dimya grandis Dall. Cotypes. Oligocene. Potrero, Rio Amina, Santo Domingo.

Dall, Proc. U. S. Nat. Mus., XIX, 1896, p. 328; Trans Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 764, pl. 35. fig. 8

45548. Dinobolus? parvus Whitfield. Plastotype.
Trenton (Ord.). Wykoff, Minnesota.

Winchell and Schuchert, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 356, figs. A and C.

35454. Dinorthis subquadrata (Hall). Plesiotypes.

Richmond (Ord.). Wilmington, Illinois.

Hayes and Ulrich, U. S. Geol. Surv., Folio 95, 1903, illustration sheet, figs. 7, 8.

Dipeltis. See Mylacris (Dipeltis).

14577. Diphyphyllum fasciculum Meek. Cotypes.

14578. Upper Devonian. Argyle and Treasure Hills, White Pine District, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 29, pl. 2, figs. 4-4b.

4884. Dipleura dekayi Green. Plastotypes.

4919. Hamilton (Dev.). Northumberland, and Lehighton, Pennsylvania.

Green, Mon. Trilobites N. America, Phila., 1832, p. 79. Cast Nos. 30, 31.

= Homalonotus dekayi.

See Nuttainia sparsa.

44071. Diploclema sparsum (Hall). Plesiotypes and figured sections.

Niagara (Sil.). Lockport, New York.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 369, pl. 53, fig. 10.

43251. Diploclema trentonense Ulrich. Cotypes and figured sections.

Trenton (Ord.). Trenton Falls, New York.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 369, pl. 53, figs. 9-9c.

155739. Diplodonta acclinis (Conrad). Plesiotype.
Pliocene. Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1186, pl. 28, figs. 2, 13.

107334. Diplodonta alta Dall.

Cotypes.

114717. Oligocene. Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 189, pl. 11, figs. 9a, 9b; Pt. V. 1900, p. 1183, pl. 44, fig. 19.

112365. Diplodonta caloosaensis Dall. Holotype.

Pliocene. Tillys Lake, Waccamaw River, South Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1188, pl. 44, fig. 16.

135724. Diplodonta (Felaniella) minor Dall. Holotype.
Oligocene. Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1183, pl. 44, fig. 17.

155744. Diplodonta (Phlyctiderma) puncturella Dall. Holoty Oligocene. Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, 1183, pl. 45, fig. 26. 135864. Diplodonta radiata Dall. Holotype.
Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p.
1184, pl. 44, fig. 11.

Diplodonta shilohensis Dall. Cotypes.

Basal Miocene. Shiloh and Jericho, Cumberland County,
New Jersey.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1184.

144548. Diplodonta yorkensis Dall. Holotype.
Miocene. York River, near Yorktown, Virginia.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1185, pl. 43, fig. 5.

Diplograptus? simplex Emmons. Plesiotype.

Lower Cambrian. Parkers Quarry, Georgia, Vermont.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 92, pl. 11, figs. 4, 4a.

= Phyllograptus? cambrensis.

8311. Diplopodia hilli (Clark).

Austin (Upper Cret.). Texas.

Clark, Bull. No. 97, U. S. Geol. Surv., 1893, p. 50, pl. 16, figs. 2a-g.

See Pseudodiadema hilli.

19115. Diplopodia texanum (Roemer). Plesiotype.
Fredericksburg (Lower Cret.). Georgetown, Texas.

Clark, Bull. No. 97, U. S. Geol. Surv., 1893, p. 48, pl. 15, figs. 1a-f; pl. 16, figs. 1a-d.

See Cyphosoma texanum.

43390. Diplotrypa? dubia Ulrich. Figured sections of holotype. Richmond (Ord.). Wilmington, Illinois.
Ulrich, Geol. Surv. Ill., VIII, 1890, p. 459, pl. 33, figs. 3-3b.

43534. Diplotrypa limitaris Ulrich. Holotype and figured sections. Trenton (Ord.). Goodhue County, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I. 1893, p. 286, fig. 18.

43654. Diplotrypa milleri Ulrich. Holotype and figured sections. Osgood (Sil.). Osgood, Indiana.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 245, pl. II, figs. 2-2c.

43533. Diplotrypa neglecta Ulrich. Holotype and figured sections.

Trenton (Ord.). Hader, Minnesota.

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Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt.I, 1893, p. 287, fig. 19.

43306. Diplotrypa patella Ulrich. Holotype and figured sections. Richmond (Ord.). Oxford, Ohio.

Ulrich, Geol. Surv. Ill., VIII, 1890. p. 458, pl. 33, figs. 2-2d.

= Mesotrypa patella.

43810. Diplotrypa westoni Ulrich. Figured sections and fragment of holotype.

Trenton (Ord.). Big Island, Lake Winnipeg, Manitoba. Ulrich, Geol. Surv. Canada, Contr. Micro-Pal., Cambro-Sil., Pt. II, 1889, p. 30, pl. 8, figs. 4a, 4b.

14276. Discina connata Walcott. Cotypes. Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 214, pl. 7, figs. 3, 3a.

=Lingulodiscina (?) connata.

13780. Discina lodensis (Hall).

Plesiotype.

White Pine Shale (Lower Carb.). Applegate Canyon, White Pine District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 112, pl. 2, figs. 5, 5a.

=Orbiculoidea lodensis.

111667. Discina lugubris (Conrad).

Plesiotype.

Miocene. Shiloh, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 23, pl. 1, figs. 1-3.

= Discinisca lugubris.

1009. **Discina manhattanensis** Meek and Hayden. Cotypes. Upper Carboniferous. Opposite Manhattan, Kansas.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., 1859, p. 25.

=Orbiculoidea missouriensis.

13858. Discina minuta (Hall). Plesiotype. Upper Devonian. The Gate, near Eureka, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 112, pl. 13, fig. 5.

=Orbiculoidea minuta.

14279. Discina newberryi Hall. Plesiotype.

Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 213, pl. 18, figs. 3 (2, 2a?).

=Orbiculoidea newberryi.

14277. Discina nitida (Phillips). Plesioty

Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 213, pl. 7, 4, 4a.

=Orbiculoidea nitida.

1102. **Discina tenuilineata** Meek and Hayden. Holotype. Permian. Cottonwood Creek, Kansas.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., 1859, p. 25. =Orbiculoidea tenuilineata.

13387. Discina utahensis Meek. Cotypes.
Triassic. Weber Canyon, Wasatch Range, Utah.

Meek, Rept. U. S. Geol. Expl., 40th Par., IV, Pt. I, 1877, p. 99, pl. 10, figs. 3, 3a (named at end of description).

109289. Discinisca lugubris (Conrad). Plesiotype. Miocene. Probably Nansemond River, Virginia.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1534, pl. 58, fig. 13.

See Discina lugubris.

45214. Discinopsis gulielmi Matthew. Plastotype. St. John (Cambrian). Portland, New Brunswick.

Hall and Clarke, Nat. Hist. New York, Pal. VIII, Pt. I, 1892, p. 105, pl. 3, figs. 21, 22.

83659. Discohelix retifera Dall. Cotypes. Pliocene. Guadalupe Island, West Indies.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 332, pl. 19, figs. 1, 1b, 1c.

158069. Discotrochus orbignianus Milne-Edwards and Haime. 158070. Plesiotypes.

Lower Claiborne (Eocene). Bienville Parish, Louisiana; Newton, Mississippi.

Vaughan, Mon. XXXIX, U. S. Geol, Surv., 1900, p. 79, pl. 5, figs. 14-19b.

Oligocene. Jamaica, British West Indies.

Guppy, Geol. Mag., London, Dec. II, I, 1874, pl. 16, fig. 11.

114635. Divaricella chipolana Dall. Holotype. Oligocene. Alum Bluff, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903. p. 1389, pl. 51, fig. 2.

157796. Divaricella compsa Dall. Holotype. Pliocene. Shell Creek, De Soto County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI. 1903. p. 1391. pl. 51. fig. 3.

Oligocene. Vendryes, Jamaica, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 327, pl. 30, fig. 4

145142. Divaricella quadrisulcata (Orbigny). Plesiotype.

Miocene. Petersburg, Virginia.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903. p. 1389, pl. 51. fig. 1.

97490. Dolabella aldrichi Dall.

Cotypes.

Oligocene. Alum Bluff, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 18, pl. 10, fig. 7a.

46759. Dolabra? alpina Hall.

Plastotype.

Lower Coal Measures. Alpina, Iowa.

Hall, Rept. Geol. Surv. Iowa, I, Pt. II, 1858, p. 716, pl. 29, fig. 2.

46360. **Dolabra sterlingensis** Meek and Worthen. Plastotype. Richmond (Ord.). Sterling, Illinois.

Meek and Worthen, Geol. Surv. Ill., III, 1868, p. 339, pl. 4, figs. 10a-c.

=Whitella sterlingensis.

35140. Dolatocrinus asterias Wood. Holotype and paratypes.

36022. Middle Traverse (Dev.). Collins quarry, near Alpena, 36023. Michigan.

Wood, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 71, text figs. 5, 6, 7, pl. 16, figs. 1, 1a.

26396. **Dolatocrinus costatus** Wood. Holotype. Middle Traverse (Dev.). Collins quarry, near Alpena, Michigan.

Wood, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 70, pl. 16, figs. 6, 6a.

36029. Dolatocrinus excavatus Wachsmuth and Springer.

Plesiotype.

Middle Devonian. Louisville, Kentucky.

Wood, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 78.

42428. Dolatocrinus major Wachsmuth and Springer. Plesiotype.
Onondaga (Dev.). Columbus, Ohio.

Wood, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 76.

43110. Dolatocrinus ornatus Meek.
Onondaga (Dev.). Columbus, Ohio.

Plesiotypes.

Wood, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 76.

36024. Dolatocrinus triadactylus Barris. Plesiotypes.
Upper Traverse (Dev.). Partridge Point, Alpena, Michigan.

Wood, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 74.

25673. Dolichocephala lacoana Claypole. Holotype. Catskill (Upper Dev.). Meshoppen, Wyoming County, Pennsylvania.

Claypole, Proc. Amer. Phil. Soc., XXI, 1883, p. 236, plate.

=Stylonurus excelsior.

3536. Dolium petrosum Conrad.

Cotype

Miocene. Astoria, Oregon.

Conrad, Wilkes U. S. Expl. Exped., X, 1849, p. 727, Atlas, pl. 19, fig. 3a, b, 4a, b, 5a, b.

23870. Domatoceras umbilicatum Hyatt. Holotype.
Upper Carboniferous. Oswego, Kansas.

Hyatt, Second Ann. Rept. Geol. Surv. Texas, 1891, p. 343, text figs. 45, 46.

39940. Donacicrinites simplex Troost.

Chirotype.

Silurian. Decatur County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 62.

108450. Donax æquilibrata Dall.
Pliocene. Cape Fear River, North Carolina.

Holotype.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p.

all, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p 968, pl. 28, fig. 17.

114682. Donax chipolana Dall.

Holotype.

Oligocene. Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 966, pl. 44, fig. 20.

22888. Donax cuneata Stanton.

Holotype.

Colorado (Cret.). Bear River City, Wyoming.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 110, pl. g. fig. 1.

115034. Donax emmonsi Dall.

Plesiotype.

Miocene. Magnolia, Duplin County, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 95, pl. 28, fig. 16.

115654. Donax flabagelloides Guppy.

Holotype

Pliocene. Matura, Trinidad, British West Indies.

Guppy, Geol. Mag., London, Dec. II, I, 1874, p. 435, pl. 18, fig. 14

22889. Donax? oblonga Stanton.

Cotypes

Colorado (Cret.). Coalville, Utah.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 111, pl. \$ fig. 2.

3613. Donax? protexta Conrad.

Holotype.

Miocene. Astoria, Oregon.

Conrad, Wilkes U. S. Expl. Exped., X, 1849, pp. 723, 724, Ms. pl. 17, fig. 9.

=Solen (Plectosolen) protextus.

115722. Dosinia (Dosinidia) acetabulum obliqua Dall. Holotyp. Chesapeake (Miocene). Alum Bluff, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1993.

164869. Dosinia? alaskana Dall.

Holoty

Miocene. Popof Island, Shumagins, Alaska.

Dall, Harriman Alaska Exped., IV, 1904, p. 115, pl. 10.

1835. Dosinia alta Conrad.

Holotype.

Eocene. Canada de las Uvas, California.

Conrad, Rept. Expl. and Surv. R. R. Miss, Riv. to Pacific Ocean, V, 1856, p. 320, pl. 2, fig. 2.

114576. Dosinia (Dosinidia) chipolana Dall. Holotype. Chipola (Oligocene). Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1229, pl. 54, fig. 4.

115541. Dosinia cyclica Guppy.

Holotype.

Eocene. Manzanilla, Trinidad, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 582, pl. 26, fig. 15.

= Lucinopsis cyclica.

12282. Dosinia jurassica Whitfield.

Cotypes.

Jurassic. Near the Belle Fourche River, and on Spearfish Creek, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 373, pl. 5, figs. 21-24.

135891. Dosinia (Dosinidia) liogona Dall.

Cotypes.

Uppermost Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1230, pl. 53, figs. 4, 7; pl. 54, fig. 11.

13343. Dosinia longula Conrad.

Holotype.

Miocene. Salinas River, Monterey County, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 193, pl. 7, fig. 2.

12249. Dosinia missouriana (Morton)?

Plesiotype.

Fort Pierre (Cret.). Cheyenne River, ten to fifteen miles west of Beaver Creek, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 416, pl. 11, figs. 25, 26.

13357. Dosinia montana Conrad.

Holotype.

Miocene. Salinas Valley, Monterey County, California.

Conrad, Rept. Expl. and Surveys R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 194, pl. 6, fig. 4.

13356. Dosinia subobliqua Conrad.

Holotype.

Miocene. Salinas Valley, Monterey County, California.

Conrad, Rept. Expl. and Surveys R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 194, pl. 6, fig. 5.

1319. Dosinia? tenuis Meek.

Cotypes.

Nanaimo (Cret.). Nanaimo, Vancouver Island.

Meek, Proc. Acad. Nat. Sci. Phila., for 1861, p. 315.

=Cyprimeria? tenuis.

41375	Drepanella ampla Ulrich. Ho Stones River (Ord.). High Bridge, Kentucky.
	Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p 8, fig. 2.
41379.	Drepanella bigeneris Ulrich.  Stones River (Ord.). Minneapolis, Minnesota.  Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., I 1894, p. 672, pl. 44, figs. 20-22.
41558.	Drepanella bilateralis Ulrich.  Black River (Ord.). St. Paul, Minnesota.  Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., I 1894, p. 671, pl. 46, figs. 35-38.
41377.	Drepanella crassinoda Ulrich.  Stones River (Ord.). High Bridge, Kentucky.  Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, 8, figs. 1a-c.
41376.	Drepanella elongata Ulrich.  Stones River (Ord.). High Bridge, Kentucky.  Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, 8, figs. 5a, b (on plate changed to D. ampla var.  = Drepanella ampla elongata.
41373.	Drepanella macer Ulrich.  Stones River (Ord.). Lavergne, Tennessee.  Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, 8, figs. 4a-c.  = Drepanella crassinoda macra.
41378.	Drepanella nitida Ulrich.  Stones River (Ord.). High Bridge, Kentucky.  Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, 8, figs. 3a, b (on plate changed to D. crassinoda va  = Drepanella crassinoda nitida.
41374.	Drepanella richardsoni canadensis Ulrich. Lorraine (Ord.). Oakville, Ontario, Canada. Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890. I
97321.	Drillia acucincta Dall.  Pliocene. Caloosahatchie River, near Fort Th
	Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, I pl. 2, fig. 11.
97320.	Drillia acurugata Dall.  Pliocene. Caloosahatchie River, near Fort The Florida.

Dall, Trans, Wagner Free Inst. Sci. Phila., III, Pt. I, 1 pl. 2, fig. 12.

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97312. Drillia aepynota acila Dall. Cotypes.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 29.

113168. **Drillia aphanitoma** Dall. Cotypes. Pliocene, Shell Creek, De Soto County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 221, pl. 14, fig. 2b.

113169. Drillia aphanitoma oxia Dall. Holotype. Pliocene?. Cape Fear River, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 222, pl. 14, fig. 1b.

97327. **Drillia bigemma** Dall.

Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 35, pl. 2, fig. 6.

97318. Drillia ebenina Dall.

Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 33, pl. 2, fig. 8.

97326. Drillia edilia Dall.

Pliocene. Caloosahatchie River, near Fort Thompson,
Florida

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 35, pl. 3, fig. 9.

111163. Drillia elegans (Emmons).

Miocene. Jericho, New Jersey.

Plesiotype.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 115, pl. 21, figs. 2-4.

97329. Drillia hoplophorus Dall. Holotype. Pliocene. Shell Creek, De Soto County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 221, pl. 14, fig. 1a.

162537. Drillia johnsoni Arnold. Holotype.
Pleistocene. San Pedro, California.

Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 206, pl. 8, fig. 17.

97332. Drillia (lissotropis var.?) perpolita Dall. Holotype.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 36, pl. 2, fig. 2.

97333. Drillia (lissotropis var.) scissurata Dall. Cotypes.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 36.

- 162536. Drillia merriami Arnold. Holotype. Pliocene. Deadman Island, off San Pedro, California.

  Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 207, pl. 8, fig. 7.
- 113144. Drillia myrmecoön Dall. Holotype.
  Pliocene (?). Cape Fear River, North Carolina.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892,
  p. 220, pl. 14, fig. 2.
- Oligocene. Ballast Point, Tampa, Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 29, pl. 4, figs. 5, 5a.
- 97325. Drillia piscator Dall.

  Pliocene. Caloosahatchie River, near Fort Thompson.
  Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 34.
  pl. 2, fig. 10.
- 97324. Drillia podagrina Dall.

  Pliocene. Caloosahatchie River, near Fort Thompson.
  Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 34.
  pl. 2, fig. 9.
- Pliocene. Shell Creek, De Soto County, Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 222, pl. 14, fig. 1.
- 97323. Drillia sedilia Dall.

  Pliocene. Caloosahatchie River, near Fort Thompson.
  Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 33.
  pl. 2, fig. 1.
- Pliocene. Shell Creek, De Soto County, Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 223, pl. 14, fig. 2a.
- Miocene. Shiloh, New Jersey.
  Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 116, pl. 21. figs. 5-7.
- 38213. Drymadusa speciosa (Heer). Plesiotypes.
  Upper Miocene. Oeningen, Baden, Germany.
  Scudder, Geol. Mag., London, Dec. IV, II, 1895, p. 117, pl. 6, fig. 1

43388. Drymotrypa dichotoma Ulrich. Holotype.
Trenton (Ord.). Montreal, Canada.
Ulrich, Geol. Surv. Ill., VIII, 1890, p. 399, pl. 53, fig. 6.

43389. Drymotrypa diffusa (Hall). Plesiotype and figured sections. Rochester (Sil.). Lockport, New York.

Ulrich, Geol. Surv. Ill., VIII, 1890, pl. 53, figs. 7-7b.

27738. Duncanella rudis Girty.

Helderbergian (Dev.). Big Sandy River, Benton County,
Tennessee.

Girty, Nineteenth Ann. Rept. U. S. Geol. Surv., 1900, p. 553.

45796. Dyeria costata (James). Plesiotypes.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final
Rept., III, Pt. II, 1897, p. 1044, fig. 8.

- 13898. Dystactella insularis Walcott. Holotype.
  Middle Devonian. Grays Canyon, Eureka District, Nevada.
  Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 172, pl. 15, fig. 8.

  = Nuculites insularis.
- 46553. **Dystactospongia minima Ulrich.** Holotype. Richmond (Ord.). Near Hanover, Butler County, Ohio. Ulrich, Amer. Geol., III, 1889, p. 243.
- 46554. Dystactospongia minor Ulrich and Everett. Figured sections of holotype.

  Stones River (Ord.). Dixon, Illinois.

  Ulrich and Everett, Geol. Surv. Ill., VIII, 1890, p. 278, pl. 8, figs. 3a, 3b.
- 35404. **Dystactospongia minor** Ulrich and Everett. Plesiotypes. Stones River (Ord.). Two miles southwest of Columbia, Tennessee.

Hayes and Ulrich, U. S. Geol. Surv., Folio 95, 1903, illustration sheet, figs. 48, 49.

46555. Dystactospongia rudis Ulrich and Everett. Figured sections of holotype.

Stones River (Ord.). Dixon, Illinois.

Ulrich and Everett, Geol. Surv. Ill., VIII, 1890, p. 279, pl. 8, fig. 4a.

Ecculiomphalus devonicus Walcott. See Eccyliomphalus devonicus.

45797. Eccyliomphalus contiguus Ulrich. Cotypes.
Stones River (Ord.). Murfreesboro, Tennessee.

Ülrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1037, pl. 74, figs. 48-52.

13934. Eccyliomphalus devonicus Walcott. Cotype.
Middle Devonian. Atrypa Peak, Eureka District, Nevada.
Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 187, pl. 6, figs.
6 6a.

45798. Eccyliomphalus subrotundus Ulrich and Scofield.

Holotype.

Trenton (Ord.). Wykoff, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1037, pl. 75, figs. 17, 18.

46054. Eccyliomphalus undulatus Hall. Plesiotype. Stones River (Ord.) Lebanon, Tennessee.

 Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1036, pl. 75, figs. 19-20.

45799. Eccyliopterus beloitensis Ulrich and Scofield. Holotype. Stones River (Ord.). Beloit, Wisconsin.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1032, pl. 62, fig. 70; pl. 74, figs. 1-4.

45800. Eccyliopterus owenanus (Meek and Worthen). Plesiotypes.
45801. Trenton (Ord.). Wykoff, and Goodhue County, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1032, pl. 74, figs. 10-14.

45802. Eccyliopterus triangulus (Whitfield). Plesiotypes. Beekmantown (Ord.). Providence Island, Vermont.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1031, pl. 62, fig. 73; pl. 74, figs. 5.6.

45803. Eccyliopterus volutatus (Whitfield). Plesiotypes.

Beekmantown (Ord.). Fort Cassin, Vermont.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1031, pl. 62, figs. 71, 72; pl. 74, figs. 7-9.

115417. Echinanthus antillarum Cotteau. Holotype. Eccene. St. Bartholomew, West Indies.

Cotteau, Kongl. Svenska Vet-Akad. Hand., XIII, 6, 1874, p. 26, pl. 4, figs. 9-12.

20266. Echinobrissus texanus Clark.

Austin (Upper Cret.). Austin, Texas.

Clark, Johns Hopkins Univ. Circ. No. 87, 1891, p. 70; Bull. No. 9, U. S. Geol. Surv., 1893, p. 62, pl. 26, figs. 22-2f.

14997. Echinocaris whitfieldi Clarke. Cotypes. Naples (Dev.). Hatch Hill, Naples, New York.

Clarke, Bull. No. 16, U. S. Geol. Surv., 1885, p. 45, pl. 2, figs. 34

135740. Echinochama antiquata Dall. Holotype Bowden (Oligocene). Jamaica.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III. Pt. VI. 1905. p. 1404, pl. 54, fig. 9.

35091. Echinoencrinites fenestratus Troost. Chirotype. Silurian. Decatur County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci. II, 1850, p. 60.

=Tetracystis fenestratus.

26785. Echinognathus clevelandi Walcott. Cotypes.
Utica (Ord.). Near Holland Patent, Oneida County, New
York.

Walcott, Amer. Journ. Sci. (3), XXIII, 1882, p. 213, fig. 1; p. 214, fig. 2.

115372. Echinolampas anguillæ Cotteau.

Holotype.

Miocene. Anguilla, West Indies.

Cotteau, Kongl. Svenska Vet-Akad. Hand., XIII, 6, 1874, p. 24, pl. 4, figs. 5-8.

115401. Echinolampas antillarum Cotteau.
Eocene. St. Bartholomew, West Indies.

Holotype.

Cotteau, Kongl. Svenska Vet-Akad. Hand., XIII, 6, 1874, p. 19, pl. 3, figs. 9-12.

115374. Echinolampas clevei Cotteau.

Holotype.

115419. Eocene. St. Bartholomew, West Indies.

Cotteau, Kongl. Svenska Vet-Akad. Hand., XIII, 6, 1874, p. 23, pl. 4, figs. 1-5.

115387. Echinolampas lycopersicus Guppy. Holotype.

115388. Miocene. Anguilla, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 300, pl. 19, fig. 8.

115389. Echinolampas ovum-serpentis Guppy. Cotypes.

115392. Eocene. San Fernando, Trinidad, British West Indies.

I I 5409. Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 300, pl. 19, figs. 4-6.

115383. Echinolampas semiorbis Guppv. Holotype.

115386. Miocene. Anguilla, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 299, pl. 19, fig. 7.

115398. Echinometra prisca Cotteau.

Cotypes.

Miocene, Anguilla, West Indies.

Cotteau, Kongl. Svenska Vet-Akad. Hand., XIII, 6, 1874, p. 12.

1 15402. Echinoneus cyclostomus Leske. Plesiotypes.

Miocene. Anguilla, West Indies.

Cotteau, Kongl. Svenska Vet-Akad. Hand., XIII, 6, 1874, p. 14, pl. 1, figs. 28-30.

6778. Edmondia aspinwallensis Meek. Holotypi

Upper Carboniferous. Aspinwall, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Nebr. (Hayden), 1872, p. 216, pl. 4, figs. 2a-2c.

- 4184. Edmondia? calhouni Meek and Hayden. Cotypes.
  Permian. Near mouth of Smoky Hill River, Kansas.

  Meek and Hayden, Trans. Albany Inst., IV, 1858, p. 80.

  = Pleurophorus? calhouni.
- 14387. Edmondia? circularis Walcott. Holotype. Lower Carboniferous. Eureka District, Nevada. Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 246, pl. 22, fig. 9.
- 35302. Edmondia gibbosa Geinitz. Plesiotype.
  35303. Rico (Upper Carb.). Scotch Creek, Rico Quadrangle,
  Colorado, and Graham, Young County, Texas.

  Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 447, pl. 9.

figs. 7, 8, 9.

- 6517. Edmondia? glabra Meek. Cotypes. Upper Carboniferous. Nebraska City, Nebraska.

  Meek, Final Rept. U. S. Geol. Surv. Nebr. (Hayden), 1872, p. 214, pl. 10, figs. 7a, 7b.
- 14386. Edmondia medon Walcott. Holotype. Lower Carboniferous. Eureka District, Nevada. Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 245, pl. 23, fig. 6.
- 20132. Edmondia myrina Hall and Whitfield. Cotypes. Triassic. Dun Glen, Pah-Ute Range, Nevada.

  Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 283, pl. 6, fig. 19.
- 6495. Edmondia nebrascensis (Geinitz). Plesiotypes. Upper Carboniferous. Nebraska City, Nebraska.

  Meek, Final Rept. U. S. Geol. Surv. Nebr. (Hayden), 1872, p. 214, pl. 10, fig. 8b.
- Cotypes. Upper Carboniferous. Nebraska City, Nebraska.

  Meek, Final Rept. U. S. Geol, Surv. Nebr. (Hayden), 1872, p. 214, pl. 10, fig. 8a.
- 13000. Edmondia? pinonensis Meek. Cotypes. Middle Devonian. Three miles south of Pinon Pass, Pinon Range, Nevada.
  Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 46. pl. 1, figs. 8, Sa.
- Edmondia reflexa Meek. Cotypes. Upper Carboniferous. Nebraska City, Nebraska. Meek, Final Rept. U. S. Geol. Surv. Nebr., 1872, p. 213, pl. 10, figs. 6a, b, (2 pl. 4, fig. 7).
- 35255. Edmondia? reflexa Meek. Plesiotypes.
  Upper Coal Measures. Atoka Quadrangle, Indian Territory.
  - Girty, Nineteenth Ann. Rept. U. S. Geol. Surv., 1900, p. 585, pl. 72, figs. 54-50.

6760. Edmondia subtruncata Meek. Holotype.
Upper Carboniferous. Rock Bluff, on the Missouri, Nebraska.

Meek, Final Rept. U. S. Geol, Surv. Nebr. (Hayden), 1872, p. 215, pl. 2, fig. 7.

46556. Edriospongia basalis Ulrich and Everett. Figured sections of holotype.

Stones River (Ord.). Dixon, Illinois.

Ulrich and Everett, Geol. Surv. Ill., VIII, 1890, p. 272, pl. 6, fig. 1c.

108445. **Egerella triangulata** (Lea). Plesiotype. Claibornian (Eocene). Claiborne, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 964.

37996. Eileticus æqualis Scudder. Cotypes.

Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, p. 421, pl. 38, figs. 6-9; Foss. Insects N. America, I, 1890, p. 397, pl. 30, figs. 6-9.

38004. Eileticus anthracinus Scudder. Plesiotype.
Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, p. 420, pl. 38, fig. 5; Foss. Insects N. America, I, 1890, p. 396, pl. 30, fig. 5.

114455. Emarginula (Rimula) caroliniana Dall. Holotype.
Pliocene. Waccamaw River, South Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 429, pl. 20, fig. 10.

112706. Emarginula pilsbryi Dall. Cotypes.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 429, pl. 21, figs. 8, 8a.

12237. Enallaster obliquatus Clark. Holotype. Fredericksburg (Lower Cret.). Texas.

Clark, Bull. No. 97, U. S. Geol. Surv., 1893, p. 79, pl. 40, figs. 1a-l.

8349. Enclimatoceras (Nautilus) ulrichi White. Holotype and paratypes.

18711. Eocene. Near Little Rock, Arkansas.

White, Bull. No. 4, U. S. Geol. Surv., 1884, p. 17, pls. 7-9.—Harris, Ann. Rept. Geol. Surv. Ark., Pt. II, 1894, p. 38, pl. 2.

41953. Encrinurus cristatus Clarke. Holotype. Richmond (Ord.). Spring Valley, Minnesota.

Clarke, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, I 1894, p. 741, fig. 58. 41954. Encrinurus vannulus Clarke.

Cotype.

Stones River (Ord.). Dixon, Illinois.

Clarke, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 740, fig. 47.

17401. Endoceras proteiforme Hall?

Plesiotype.

Upper Pogonip (Ord.). Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 86, pl. 12, figs. 1, 1a, 1c.

12323. Endocostea sulcata (Roemer).

Plesiotype.

Fort Pierre (Cret.). East Fork of Beaver Creek, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 404, pl. 10, fig. 6.

12261. Endocostea typica Whitfield.

Cotypes.

Fort Pierre (Cret.). Old Woman Fork, Cheyenne River, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 403, pl. 9, figs. 1-6.

46194. Endodesma compressum Ulrich.

Holotype.

Trenton (Ord.). Near Wykoff, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 529, pl. 36, figs. 35–37.

46195. Endodesma cuneatum Ulrich.

Holotype.

Trenton (Ord.). Near Wykoff, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 526, pl. 36, figs. 33, 34.

46196. Endodesma gesneri (Billings).

Plesiotype.

Trenton (Ord.). Ottawa, Canada.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 528, pl. 37, figs. 3, 4.

46197. **Endodesma orthonotum** (Meek and Worthen). Plastotype. Stones River (Ord.). Dunleith, Illinois.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 527, pl. 37, figs. 1, 2.

See Modiolopsis orthonota.

23871. Endolobus gibbosus Hyatt.

Cotypes.

Upper Carboniferous. Colorado River, near Bend, San Saba County, Texas.

Hyatt, Second Ann. Rept. Geol. Surv. Texas, 1891, p. 353, text figs. 55, 56.

=Stearoceras gibbosum.

158460. Endopachys lonsdalei Vaughan.

Holotype.

Claibornian (Eocene). Newton, Mississippi.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 189, pl. 22, figs. 10, 10a,

158414. Endopachys maclurii (Lea). Plesiotypes. Claibornian (Eocene). Claiborne, Alabama.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 186, pl. 21, figs. 15, 16.

158456. Endopachys maclurii triangulare Conrad? Plesiotype. Jacksonian (Eocene). Jackson, Mississippi.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 188, pl. 22, fig. 9.

35201. Endothyra baileyi (Hall). Plesiotypes. Warsaw (Miss.). Spergen Hill, Indiana.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 507, pl. 71, figs. 12a, 12b.

35202. Endothyra baileyi parva Girty. Cotypes.

Madison (Miss.). White Mountain, Absaroka Range,
Yellowstone National Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 507, pl. 71, figs. 13a-13c.

8286. Endothyra ornata Brady. Plesiotype.

Carboniferous. Téton Mountains, south of Yellowstone National Park.

White, Proc. U. S. Nat. Mus., II, 1880, p. 291.

29399. Engonoceras complicatum Hyatt. Holotype and paratype. 29400. Fredericksburg (Cret.). Near Austin, Texas.

Hyatt, Mon. XLIV, U. S. Geol. Surv., 1903, p. 175, pl. 24, figs. 6-8.

8301a. Engonoceras gibbosum Hyatt. Cotypes.

29388 Fredericksburg (Cret.). Bell County, and near Denison, to and Gainesville, Texas.

29390. Hyatt, Mon. XLIV, U. S. Geol. Surv., 1903, pp. 171-175, pl. 22, figs. 6-10; pl. 23, figs. 4-6.

8301b. Engonoceras pierdentale commune Hyatt. Cotypes.

22643. Fredericksburg (Cret.). Bell County, and near Glenrose,

29392. Texas; near Cerrogordo, Arkansas; Goodland, Indian

29394. Territory.

Hyatt, Mon. XLIV, U. S. Geol. Surv., 1903, p. 165, pl. 20, figs. 9-13; pl. 21, fig. 1.

29398. Engonoceras retardum Hyatt. Holotype.

Grayson (Lower Cret.). Near Pottsboro, Texas.

Hyatt, Mon. XLIV, U. S. Geol. Surv., 1903, p. 160, pl. 19, figs. 15-17.

29401. Engonoceras serpentinum (Cragin). Plesiotypes.
Washita (Lower Cret.). Four and a half miles northeast
of Gainesville, Texas.

Hyatt, Mon. XLIV, U. S. Geol. Surv., 1903, p. 162, pl. 19, figs. 7-9, 11-14.

29397. Engonoceras subjectum Hvatt. Cotyp Washita Cret. . Near Denison, Texas.

23147. Engonoceras uddeni (Cragin). Plesiotype Kiowa Cret. . McPherson County, Kansas.

Hyatt, Mon. XLIV, U. S. Geol. Surv., 1903, pp. 159-161, pl. 1

Hyatt, Mon. XLIV, U. S. Geol. Surv., 1903, p. 168, pl. 22, figs. 1,

146738. Ensis minor Dall.

Plesiotype

Pleistocene. Simmons Bluff, South Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 190 P. 955.

311. Entalis? paupercula Meek and Hayden). Holotyp Fox Hills (Cret.). Moreau River, South Dakota.

> Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 269, pl. 1 Dg. 14.

See Dentalium pauperculum.

6485. Entolium aviculatum (Swallow). Plesiotype Upper Carboniferous. Nebraska City, Nebraska.

> Meek. Final Rept. U. S. Geol. Surv. Neb. (Hayden), 1872, p. 18 pl. 9. figs. 11a-f.

41565. Entomis madisonensis Ulrich. Holotyp Richmond Ord. . Five miles north of Madison, Indian

Firich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 107, pl. figs. 122, 12b.

41566. Entomis waldronensis Ulrich. Holotyp

Waldron Sil. Near Waldron, Indiana.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1897, p. 18 pł. 12, figs. 3a, 3b.

15315. Eocystites?? longidactylus Walcott. Middle Cambrian. Chisholm Mine, Ely Mountains, ne Pioche, Nevada.

> Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 94, pl. 5, fig. pl. 6. figs. 1-1c.

14926. Eophyton linnæanum Linnarsson. Plesiotyt

Lower Cambrian. Lugnas, Sweden.

Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 587, pl. fig. 2; Mon. XXX, U. S. Geol. Surv., 1898, p. 64, pl. figs. 1, 2.

46055. Eotomaria canalifera Ulrich. Cotyp

Stones River (Ord.). Murfreesboro, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. 1897. p. 1002, pl. 69, figs. 9-14.

15804. Eotomaria dryope (Billings). Plesiotypes.

45805. Stones River (Ord.). Cannon Falls, Minnesota.

Black River (Ord.). Maury County, Tennessee.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1003, pl. 69, figs. 21-25.

45806. Eotomaria elevata Ulrich.

Holotype.

Trenton (Ord.). Hartsville, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1005, pl. 70, figs. 68, 69.

46056. Eotomaria labiosa Ulrich.

Holotype.

Stones River (Ord.). Murfreesboro, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1003, pl. 69, figs. 15-17.

45807. Eotomaria supracingulata (Billings). Plesiotypes.

45808. Stones River (Ord.). Beloit, Wisconsin; Dixon, Illinois.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1004, pl. 69, figs. 26-29.

45809. **Eotomaria vicina** Ulrich and Scofield. Cotype. Stones River (Ord.). Mineral Point, Wisconsin.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1003, pl. 69, figs. 19, 20.

46535. Eotrophonia setigera Ulrich.

Cotypes.

Utica (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., I, 1879, p. 91, pl. 4, figs. 5, 5a.

23866. Ephippioceras divisium (White and St. John). Plesiotypes. Upper Carboniferous. Near Oswego, Kansas.

Hyatt, Second Ann. Rept. Geol. Surv. Texas, 1891, p. 350, text figs. 52-54.

21887. Epiaster elegans (Shumard).

Plesiotype.

Washita (Lower Cret.). Texas.

Clark, Bull. No. 97, U. S. Geol. Surv., 1893, p. 80, pl. 41, figs. 1a-b; pl. 42, figs. 1a-b; pl. 43, figs. 1a-e.

9732. Epiaster whitei Clark.

Cotypes.

Washita (Lower Cret.). Duck Creek, near Denison, Texas.

Clark, Bull. No. 97, U. S. Geol. Surv., 1893, p. 82, pl. 43, figs. 2a-d; pl. 44, figs. 1a-g.

See Toxaster elegans.

111638. Erato emmonsi Whitfield.

Cotypes.

Miocene. Jericho, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 108, pl. 19, figs. 9-11.

16108. Eridonychia apicalis Ulrich.

Holotype.

Lorraine (Ord.). Newport, Kentucky.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 639, pl. 47, fig. 1.

46199. Eridonychia crenata Ulrich.

Holotype.

Richmond (Ord.). Waynesville, Ohio.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 640, pl. 47, fig. 3.

16200. Eridonychia paucicostata Ulrich.

Holotype.

**Lorraine** (Ord.). Covington, Kentucky.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 640, pl. 47, fig. 2.

43238. Eridopora macrostoma Ulrich.

Cotypes and figured sections

Chester (Miss). Sloans Valley, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 137, pl. 6 figs. 2, 2a.

43239. Eridopora punctifera Ulrich.

Holotype and figure sections

Chester (Miss.). Sloans Valley, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 138, pl. 6, fig.

43535. Eridotrypa exigua Ulrich.

Cotype

Trenton (Ord.). Two miles south of Cannon Falls, Mir

Ulrich, Geol. and Nat. Hist. Surv. Minn. Final Rept., III, Pt. 1893, p. 266, pl. 26, figs. 17-18.

43536. Eridotrypa mutabilis Ulrich.

Cotypes and figure section

Trenton (Ord.). Near Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. 1893, p. 265, pl. 26, figs. 22-32.

43537. Eridotrypa mutabilis minor Ulrich. Cotypes and figure section

Trenton Ord. Near Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. 1893. p. 266, pl. 26, figs. 20, 21, 29, 30.

332. Eriphyla gregaria (Meek and Hayden). Holotype at paratype

Montana (Cret.). Yellowstone River, near Miles Cit Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 124, text fil 6. 7. pl. 17, figs. 9a, 9b.

See Astarte gregaria.

Sosga. Erisocrinus (Ceriocrinus) hemisphericus (Shumard).

Plesiotype

Upper Carboniferous. Thirty miles west of Humbold Kansas.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (188) Pt. I. p. 127, pl. 35, fig. 5c.

= **Delocrinus** hemisphericus.

8036. Erisocrinus (Ceriocrinus) inflexus Geinitz. Plesiotype.

Upper Carboniferous. Confluence of Grand and Green rivers, Utah.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883), Pt. I, p. 128, pl. 34, figs. 9a, 9b.

= Delocrinus inflexus.

8034. Erisocrinus (Ceriocrinus) planus White. Holotype.
Upper Carboniferous. Thirty miles west of Humboldt,
Kansas.

White, Proc. U. S. Nat. Mus., II, 1880, p. 257, pl. 1, figs. 6, 7 (as E. planus); Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883), p. 127, pl. 35, figs. 5a, 5b.

= Delocrinus planus.

1080. Erisocrinus typus Meek and Worthen. Plesiotype. Upper Carboniferous. Bellevue, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Nebr. (Hayden), 1872, p. 146, pl. 1, figs. 3a, 3b.

8037. Erisocrinus typus Meek and Worthen. Plesiotype.
Upper Carboniferous. Confluence of Grand and Green rivers, Utah.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883), Pt. I, p. 126, pl. 33, fig. 5a.

114603. Ervilia chipolana Dall. Holotype. Oligocene. Alum Bluff, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 914, pl. 33, fig. 10.

I 15054. Ervilia lata Dall. Holotype.
 Miocene. Natural Well, Duplin County, North Carolina.
 I Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 915, pl. 33, fig. 20.

107406. Ervilia oregonensis Dall. Holotype. Eocene? Nehalem River, Columbia County, Oregon.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 916, pl. 33, fig. 16.

153768. Ervilia planata Dall. Cotypes.
Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898,
D. 915.

153769. Ervilia polita Dall.

Pliocene. Caloosahatchie River, near Fort Thompson,
Florida

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 916, pl. 33, fig. 17.

114704. Ervilia triangularis Dall. Hok Oligocene. Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, p. 915, pl. 33, fig. 19.

145814. Erycina (Pseudopythina?) americana Dall. Holotype. Miocene. Calvert Cliffs, Maryland.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1146, pl. 44, figs. 21, 25.

155750. Erycina carolinensis Dall. Cotypes.
Miocene. Natural Well, Duplin County, North Carolina,
and Waccamaw River, South Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1145, pl. 44, figs. 3, 22.

114676. Erycina chipolana Dall.

Cotypes.

Oligocene. Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1144, pl. 44, fig. 15; pl. 45, fig. 17.

135877. Erycina curtidens Dall. Cotypes.
Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1145, pl. 45, fig. 14, 15.

135878. Erycina fabulina Dall. Holotype. Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1145, pl. 45, fig. 1.

155755. Erycina kurtzii Dall.

Holotype.

Pliocene. Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1147, pl. 25, fig. 12.

155752. Erycina marylandica Glenn. Plesiotype.
Miocene. Plum Point, Maryland.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1146, pl. 45, fig. 19.

137389. Erycina plicatula Dall. Cotypes. Claibornian (Eocene). Claiborne, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1143, pl. 44, figs. 7, 12.

155753. Erycina (Pseudopythina) protracta Dall. Holotype.
Pliocene. Waccamaw River, South Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1146, pl. 45, fig. 22.

115652. Erycina tensa Guppy. Holotype. Miocene. Manzanilla, Trinidad, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 582, pl. 26, fig. 6.

= Corbula disparilis.

114677. Erycina undosa Dall.

5. . .

Holotype.

Oligocene. Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1144, pl. 45, fig. 3.

135637. Erycinella (Carditopsis) bernardi Dall. Holotype. Pliocene. Limon, Costa Rica.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1438, pl. 53, fig. 10.

144624. Erycinella ovalis Conrad.

Plesiotype.

Miocene. Yorktown, Virginia.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1438, pl. 53, fig. 2.

43538. Escharopora angularis Ulrich. Cotypes and figured sections. Stones River (Ord.). Minneapolis, Minnesota.

> Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 168, pl. 12, figs. 1-4, 30, 31.

43539. Escharopora confluens Ulrich. Cotypes and figured sections. Black River (Ord.). Minneapolis, Minnesota.

> Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 171, pl. 13, figs. 1-11.

43807. Escharopora (?) limitaris Ulrich. Cotypes and figured sections.

Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 172, text fig. 9, pl. 13, fig. 13.

43818. Escharopora subrecta (Ulrich). Cotypes and figured 43819. sections.

Black River (Ord.). Minneapolis and Fountain, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 168, pl. 12, figs. 5-29.

See Ptilodictya subrecta.

15307. Ethmophyllum gracile Meek.

Holotype.

Meek, Amer. Journ. Sci. (2), XLV, 1868, p. 64.

=Ethmophyllum whitneyi.

18358. Ethmophyllum meeki Walcott.

Cotype.

Lower Cambrian. Silver Peak, Nevada.

Lower Cambrian. Silver Peak, Nevada.

Walcott, Proc. U. S. Nat. Mus., XII, 1889, p. 34; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 601, pl. 55, figs. 2-2c.

15304. Ethmophyllum profundum (Billings). Plesiotypes. Lower Cambrian. L'Anse au Loup, Labrador.

> Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 84, pl. 1, figs. 1a-1c; pl. 2, figs. 3-3b; pl. 4, fig. 3.

=Archæocyathus profundum.

15306. Ethmophyllum rarum (Ford).

Plesiotype.

Lower Cambrian. Troy, New York.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 87, pl. 5, figs. 2, 2a.

= Archæocyathellus rarus.

15305. Ethmophyllum rensselaericum (Ford). Plesiotype.
Lower Cambrian. Troy, New York.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 85, pl. 5, figs.

=Archæocyathellus rensselæricum.

15307. Ethmophyllum whitneyi Meek.

Lower Cambrian. Silver Peak, Nevada.

Meek, Amer. Journ. Sci. (2), XLV, 1868, p. 62. Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 81, pl. 4, figs. 1-1c, 1f, 1g; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 601, pl. 55, figs. 1-1e.

Cotype.

See Ethmophyllum gracile.

38169. Etoblattina accubita Scudder. Holotype. Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 88, pl. 7, fig. 2.

38185. Etoblattina angusta Scudder. Holotype. Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 100, pl. 8, fig. 8.

38195. Etoblattina aperta Scudder. Holotype. Lower Cambrian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 80, pl. 5, fig. 9.

38082. Etoblattina arcta Scudder. Holotype. Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 97, pl. 8, fig. 5.

38188. Etoblattina communis Scudder. Cotypes.
Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 93, pl. 7, figs. 10-17.

38090. Etoblattina deanensis Scudder. Cotypes. Coal Measures. Forest of Dean, Gloucester, England. Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 34, pl. 12, figs. 1, 3.

38197. **Etoblattina debilis** Scudder. Cotypes. Lower Permian. Cassville, West Virginia. Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 71, pl. 4, fig. 8.

38194. Etoblattina defossa Scudder. Holotype. Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 108, pl. 9, fig. 12.

38084. Etoblattina detecta Scudder. Cotypes.
Lower Permian. Cassville, West Virginia.
Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 75, pl. 4, figs. 12, 13.

38169. Etoblattina eakiniana Scudder. Holotype. Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 88, pl. 7, fig. 1.

38080. Etoblattina exigua Scudder. Holotype.
Lower Permian. Cassville, West Virginia.
Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 76, pl. 5, fig. 4.

38075. Etoblattina exilis Scudder. Holotype.
Coal Measures. East Providence, Rhode Island.
Scudder, Bull. No. 101, U. S. Geol. Surv., 1893, p. 17, pl. 2, fig. e; ibid., No. 124, 1895, p. 101, pl. 9, fig. 1.

38193. Etoblattina expugnata Scudder. Holotype. Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 102, pl. 9, fig. 4.

38178. Etoblattina expulsata Scudder. Cotypes.
Lower Permian. Cassville, West Virginia.
Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 89, pl. 7, figs. 3, 4.

38192. Etoblattina expuncta Scudder. Holotype. Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 79, pl. 5, fig. 6.

38180. Etoblattina exsecuta Scudder. Cotypes.

Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 96, pl. 8, fig. 4.

38078. Etoblattina funeraria Scudder. Cotypes.
Lower Permian. Cassville, West Virginia.
Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 78, pl. 5, fig. 5.

38166. Etoblattina gratiosa Scudder. Holotype. Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 90, pl. 7, fig. 5.

38069. Etoblattina hilliana Scudder. Holotype.
Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.
Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 99, pl. 8,
fig. 11.

38074. Etoblattina illustris Scudder. Holotype.
Coal Measures. Pawtucket, Rhode Island.
Scudder, Bull. No. 101, U. S. Geol. Surv., 1893, p. 12, pl. 2, fig. i; ibid., No. 124, 1895, p. 70, pl. 4, fig. 11.

38079. Etoblattina immolata Scudder. Cotypes.
Lower Permian. Cassville, West Virginia.
Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 92, pl. 7, figs. 7, 8.

38083. Etoblattina imperfecta Scudder. Holotype. Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 104, pl. 9, fig. 8.

38164. Etoblattina invisa Scudder. Holotype. Lower Permian. Cassville, West Virginia. Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 106, pl. 9, fig. 9.

38200. Etoblattina lata Scudder. Holotype.
Lower Permian. Cassville, West Virginia.
Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 67, pl. 4, fig. 2.

38073. Etoblattina latebricola Scudder. Holotype. Coal Measures. East Providence, Rhode Island.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 108, pl. 9, fig. 11.

38077. Etoblattina lesquereuxii Scudder. Holotype.
Upper Coal Measures. Yatesville, near Pittston, Pennsylvania.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1879, p. 67, pl. 6, figs. 3, 4; Foss. Insects N. America, I, 1890, p. 87, pl. 6,

figs. 3, 4.

38183. Etoblattina macerata Scudder. Holotype. Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 91, pl. 7, fig. 6.

38163. Etoblattina macilenta Scudder. Holotype.
Lower Permian. Cassville, West Virginia.
Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 101, pl. 8, fig. 9.

38081. Etoblattina mactata Scudder. Holotype.
Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 92, pl. 7, fig. 9.

38068. **Etoblattina mazona** Scudder. Holotype. Upper Coal Measures. Mazon Creek, Grundy County, Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1882, p. 181, pl. 10;
Foss, Insects N. America, I, 1890, p. 233, pl. 7a;
Bull. No. 124,
U. S. Geol. Surv., 1895, p. 89, pl. 6, fig. 5.—Sellards, Amer.
Journ. Sci. (4), XVIII, 1904, p. 129, text fig. 14, on p. 128.

38198. **Etoblattina mediana** Scudder. Holotype. Lower Permian. Cassville, West Virginia. Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 69, pl. 4, fig. 4.

38199. Etoblattina mucronata Scudder. Holotype.
Lower Permian. Cassville, West Virginia.
Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 74, pl. 5, fig. 3.

38087. **Etoblattina obatra** Scudder. Holotype. Lower Permian. Cassville, West Virginia. Scudder, Bull. No. 124, U.S. Geol. Surv., 1895, p. 103, pl. 9, fig. 5.

38071. Etoblattina occidentalis Scudder. Cotypes.
Upper Coal Measures. Lawrence, Kansas.
Scudder Mem Boston Soc Nat Hist IV 1800 p. 410 pl. 22

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, p. 410, pl. 32, fig. 4; Foss. Insects N. America, I, 1890, p. 386, pl. 24, fig. 4.

38085. Etoblattina occulta Scudder. Holotype.
Lower Permian. Cassville, West Virginia.
Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 107, pl. 9, fig. 13.

38201. Etoblattina ovata Scudder. Holotype.
Lower Permian. Cassville, West Virginia.
Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 70, pl. 4, fig. 6.

38184. Etoblattina patiens Scudder. Holotype. Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 73, pl. 4, fig. 9.

38165. Etoblattina prædulcis Scudder. Holotype.
Lower Permian. Cassville, West Virginia.
Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 98, pl. 8, fig. 12.

38202. Etoblattina recidiva Scudder. Holotype. Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 109, pl. 9, fig. 14.

38179. Etoblattina residua Scudder. Holotype. Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 78, pl. 5, fig. 1.

38088. Etoblattina rogi Scudder. Cotypes.
Lower Permian. Cassville, West Virginia.
Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 102, pl. 9, figs. 2, 3.

38191. Etoblattina sagittaria Scudder. Cotypes.
Lower Permian. Cassville, West Virginia.
Scudder, Bull. No. 124, U.S. Geol. Surv., 1895, p. 68, pl. 4, fig. 3.

38076. Etoblattina scholfieldi Scudder. Holotype.
Coal Measures. Providence, Rhode Island.
Scudder, Bull. No. 101, U. S. Geol. Surv., 1893, p. 15, pl. 2, fig. b;
ibid., No. 124, 1895, p. 71, pl. 4, fig. 7.

38167. Etoblattina secreta Scudder. Cotypes. Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U.S. Geol. Surv., 1895, p. 105, pl. 9, figs. 6,7.

38142. Eucænus ovalis Scudder. Holotype.
Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1885, p. 325, pl. 29, fig. 4; Foss. Insects N. America, I, 1890, p. 289, pl. 15, fig. 4.

S0057. Eucalyptocrinites conicus Troost. Chirotypes. Silurian. Decatur County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 61.

Silurian. Decatur County, Tennessee.

Travet, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 60.

Eucalyptocrinites gibbosus Troost. Chirotype. Silurian. Decatur County, Tennessee.

Troos. Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 61.

Eucalyptocrinites goldfussi Troost. Chirotype. Silurian. Decatur County, Tennessee.

Troost. Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 60.

Silverian. Decatur County, Tennessee.

Travet, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 60.

Encalyptocrinites nashvillæ Troost. Chirotype. Schrin. Decatur County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 60.

Encalyptocrinites ovalis Troost. Chirotypes. Saurian. Perry and Decatur counties. Tennessee.

Troost. Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 60.

Eucalyptocrinites phillipsii Troost. Chirotypes.
Silurian. Decatur County, Tennessee.
Troost. Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 60.

Encalyptocrinites splendidus Troost. Chirotypes.
Sünrian. Decatur County. Tennessee.
Troost. Proc. Amer. Assoc. Adv. Sci. II. (Sci. p. 6).

Emralyptocrinites tennesses: Trees: Chirotypes: Silmum Pecutur County, Tennessee.

Trees: Proc. Amer. Assoc Adv. Sci. II. (Sec. p. c).

Enchesischer Greno-Carinata Hellprin. Holotype.
Enches Jackson Mississippi
Enthematikan Proc. U.S. Na. Mas. III. 1884 p. 154 pl. fg. 4.

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The Latinumberus Kunss City Mission.

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207 1 1 20. figs 114-1.

7753. Euconospira taggarti (Meek). Holotype.

Upper Carboniferous. Horseshoe Mountain, South Park, Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 453, pl. 10, figs. 9, 9a.

See Pleurotomaria taggerti.

46541. Euconospira turbiniformis (Meek and Worthen).

Plesiotype.

Coal Measures. La Salle, Illinois.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1080, figs. 11d, 11e.

111834. Eucymba ocalana Dall.

Holotype.

Eocene. Four and one-half miles west of Enterprise, Mississippi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, pp. 81, 89, pl. 7, fig. 1.

20133. Eudiscoceras gabbi Meek.

Holotype.

Triassic. Cottonwood Canyon, West Humboldt Range, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 128, pl. 11, figs. 4, 4a.

7869. Eulima? chrysallis Meek.

Cotypes.

Montana (Cret.). Coalville, Utah.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 (1873), p. 506.

= Eulimella? chrysallis.

112101. Eulima conoidea Kurtz and Stimpson.

Plesiotypes.

Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 159, pl. 5, fig. 11.

107082. Eulima egregia Guppy.

Holotype.

Tertiary. Monserrat, Trinidad, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 314, pl. 28, fig. 11.

7881. Eulima funicula Meek.

Cotypes.

Montana (Cret.) Coalville, Utah.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1872 (1873), p. 506.

=Eulimella? funicula.

7871. Eulima? inconspicua Meek.

Holotype.

Montana (Cret.). Coalville, Utah.

Meek, Sixth Ann. Rept. U. S. Geol, Surv. Terr., 1872 (1873), p. 507.

=Eulimella? inconspicua.

107071. Eulima (Liostraca) nobilis Guppy. Holotype. Oligocene. Vendryes, Jamaica, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 315, pl. 30, fig. 9.

7869. Eulimella? chrysallis (Meek). Holotype.
Montana (Cret.). Carletons mine, near Coalville, Utah.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883), Pt. I, p. 32, pl. 12, fig. 4a.

See Eulima? chrysallis.

7881. Eulimella? funicula (Meek).

Holotype.

Colorado (Cret.). Coalville, Utah.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1877 (1879), p. 316, pl. 9, fig. 10a.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 140, pl. 30, fig. 9.

See Eulima funicula.

7871. Eulimella? inconspicua (Meek). Holotype. Montana (Cret.). Carletons mine, near Coalville, Utah.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883), Pt. I, p. 33, pl. 12, fig. 5a.

See Eulima? inconspicua.

lowstone National Park.

35172. Eumetria verneuiliana (Hall). Plesiotype. Madison (Miss.). Crowfoot Ridge, Gallatin Range, Yel-

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 560, pl. 68, figs. 12a, 12b,

205. Eumicrotis curta (Hall).

Plesiotypes.

Jurassic. Southwest base of Black Hills, South Dakota.

Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 81, pl. 3, figs. 10a-d.

See Avicula (Monotis) tenuicostata.

20130. Eumicrotis curta (Hall).

Plesiotypes.

Jurassic. Ashley Creek, Uinta Range, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 289, pl. 7, fig. 24.

3958. Eumicrotis hawni (Meek and Hayden).
Permian. Smoky Hill River, Kansas.

Cotypes.

Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 54, pl. 2, figs. 5a-5c.

No. 172, XIV, 1804, p. 54, pl. 2, ngs. 5a-5c.

= Pseudomonotis hawni.

See Monotis hawni.

1157. Eumicrotis hawni ovata Meek and Hayden. Cotypes.

Permian. Near Cottonwood Creek, Kansas.

Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 55, pl. 2, figs. 6a, 6b.

= Pseudomonotis hawni ovata.

107379. Eunaticina caractacus Dall.

Holotype.

Oligocene. Oak Grove, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, pl. 42, fig. 6.

45810. Euomphalopterus alatus obsoletus Ulrich. Holotype. Niagara (Sil.). Near Waldron, Indiana.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 934, figs. 5g-5i.

13933. Euomphalus eurekensis Walcott. Cotypes.
Middle Devonian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 185, pl. 16, figs. 2. 28.

14218. Euomphalus laxus White. Plesiotype.

Waverly (Miss.). Dry Canyon, Oquirrh Mountains, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 260, pl. 4, figs. 24, 25.

=Euomphalus luxus.

13936. Euomphalus (Phanerotinus) laxus (Hall). Plesiotype. Upper Devonian. The Gate, near Eureka, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 186, pl. 6, fig. 3. = Eccyliomphalus laxus.

8531. Euomphalus luxus White.

Cotypes.

Lower Carboniferous. Below Orphir City, Utah.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 94, pl. 5, figs. 13a, 13b.

See Euomphalus laxus.

9825. Euomphalus michleranus Hall.

Holotype.

Middle Ordovician. Locality not given. Probably from near El Paso, Texas.

Hall, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, pl. 20, fig. 4 (see p. 103).

= Maclurea michleranus.

14219. Euomphalus (Straparollus) ophirensis Hall and Whitfield.

Cotypes.

Waverly (Miss.). Dry Canyon, Oquirrh Mountains, Utah. Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 261, pl. 4, fig. 26.

8490. Euomphalus pernodosus (Meek and Worthen). Plesiotype. Upper Carboniferous. Mesa, Carrizo River, Arizona.

White, U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1877, p. 158, pl. 12, fig. 2b.

9208. Euomphalus springvalensis White. Holotype.
Kinderhook (Miss.). Springvale, Humboldt County, Iowa.

White, Proc. Acad. Nat. Sci. Phila., 1876, p. 32; Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1878 (1883), Pt. I, p. 167, pl. 41, figs. 1a, b.

15075. Euomphalus subplanus Hall. Cotypes.

15076. Upper Carboniferous. Between Big and Little Blue Rivers, Kansas, and Stansburys Island, Great Salt Lake, Utah.

Hall, Stansbury's Expl. and Surv. Valley Great Salt Lake, Utah, 1852, p. 414, pl. 2, figs. 7a, b.

=Straparollus subplanus.

21718. Euomphalus subquadratus Meek and Worthen. Plesiotype.

Permian. Military Crossing of the Big Wichita, Baylor
County, Texas.

White, Bull. No. 77, U. S. Geol. Surv., 1891, p. 25, pl. 3, fig. 9.

14408. Euomphalus (Straparollus) subrugosus Meek and Worthen.
Plesiotype.

Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 255, pl. 18, fig. 19 = Straparollus catilloides.

4220. Euomphalus (Straparollus) utahensis Hall and Whitfield
Cotypes
Waverly (Miss.). Dry Canyon, Oquirth Mountains
Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II 1877, p. 259, pl. 4, figs. 20-23.

= Straparollus utahensis.

8058. Eupachycrinus platybasis White. Holotype Lower Aubry (Upper Carb.). Confluence of Grand an Green rivers, Utah.

White, Rept. Geol. Uinta Mts. Powell , 1876, p. 108; Twelft Ann. Rept. U. S. Geol. Surv. Terr., 1878, 1883, Pt. I. p. 12 pl. 33, fig. Sa.

38013. Euphoberia anguilla Scudder. Cotype Upper Coal Measures. Mazon Creek, Grundy County Elimois.

> Schilder, Mem. Roston, Soc. Nat. Hist., IV, (Soc. pp. 426, 43 pl. pt. fig. 5: Foss Insects N. America, I. (Soc. pp. 200, 402, 41 pl. 4 fig. 80; pl. 28, fig. 5.

18000. Euphoberia armigera Meek and Worthen. Plessictype 18000. Urger Coal Measures. Maron Creek, Grundy Cremny Dimois.

Schalber, Mem. Boston Soc. Nat. Hist., III. 1882, p. 150, pl. 1 figs. 1-3; pl. 15 figs. S. 11, fibil. IV. 1882, p. 457, pl. 3 figs. 1 4 S. pl. 35 fig. 3. Foss. Insects N. America. I. 188 pp. 212, 402, pl. 4, figs. 1-3; pl. 10, figs. S. 10; pl. 46, fig. 2, 4 S. pl. 27, fig. 5. 38031. Euphoberia carri Scudder. Cotypes.
Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1882, p. 171, pl. 12, figs. 4, 9-12, 14-19; pl. 13, figs. 16, 17; Foss. Insects N. America, I, 1890, pp. 223, 402, 405, pl. 9, figs. 4, 9-12, 14-19; pl. 10, figs. 16, 17.

38017. Euphoberia cuspidata Scudder. Holotype.
Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, pp. 426, 429, pl. 34, figs. 3, 7; Foss. Insects N. America, I, 1890, pp. 402, 405, pl. 26, figs. 3, 7.

38011. Euphoberia ferox (Salter). Plesiotype. Coal Measures. Sedgley, near Dudley, England.

Woodward, Geol. Mag., London, Dec. III, IV, 1887, p. 6, pl. 1, figs. 1-3, 6, 8, 9.

38018. Euphoberia flabellata Scudder. Holotype.
Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1882, p. 174, pl. 13, fig. 15; Foss. Insects N. America, I, 1890, pp.226, 402, pl. 10, fig. 15.

38026. **Euphoberia granosa** Scudder. Cotypes. Upper Coal Measures. Mazon Creek, Grundy County, Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1882, p. 168, pl. 13, fig. 13; ibid., IV, 1890, p. 427, pl. 34, figs. 5, 6; Foss. Insects N. America, I, 1890, pp. 221, 404, pl. 10, fig. 13; pl. 26, figs. 5, 6.

38030. Euphoberia horrida Scudder. Cotypes. Upper Coal Measures. Mazon Creek, Grundy County,

Scudder, Mem. Boston Soc. Nat. Hist., III, 1882, p. 158, pl. 13, figs. 11, 12, 14; Foss. Insects N. America, I, 1890, p. 210, pl. 10, figs. 11, 12, 14.

38025. Euphoberia hystricosa Scudder. Holotype.
Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, p. 426, pl. 33, figs. 1, 3; Foss. Insects N. America, I, 1890, p. 402, pl. 25, figs. 1, 3.

38024. Euphoberia simplex Scudder. Holotype.
Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, p. 432, pl. 35, fig. 2; Foss. Insects N. America, I, 1890, p. 408, pl. 27, fig. 2.

37989. Euphoberia spinulosa Scudder. Cotypes. 37990. Upper Coal Measures. Mazon Creek and Braidwood, Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, pp. 426, 430, pl. 34, fig. 1; pl. 35, figs. 4, 5; pl. 36, figs. 7, 8; Foss. Insects N. America, I, 1890, pp. 402, 406, pl. 26, fig. 1; pl. 27, figs. 4, 5; pl. 28, figs. 7, 8.

37992. Euphoberia tracta Scudder. Cotypes.
Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, pp. 426, 433, pl. 36, figs. 1, 4-6; Foss. Insects N. America, I, 1890, pp. 402, 409, pl. 28, figs. 1, 4-6.

Oligocene. Alum Bluff, Chattahoochee River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 146, pl. 12, fig. 9.

112167. Eupleura miocenica intermedia Dall. Cotypes.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 147.

162559. Eupleura muriciformis curta Arnold. Holotype.
Pleistocene. San Pedro, California.

Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 249, pl. 8, fig. 9.

55851. Eupleura muriciformis limata Dall. Cotypes.
Post-Pliocene. Head of Gulf of California.
Dall, Proc. U. S. Nat. Mus., XIV, 1891, p. 175.

158391. Eupsammia elaborata (Conrad). Plesiotypes. 158397. Greggs Landing (Eocene). Greggs Landing, Alabama.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 180, pl. 21, figs. 5, 7.

41639. **Eurychilina æqualis** Ulrich. Cotypes. Stones River (Ord.). High Bridge, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 129, pl. 9, figs. 5-8.

41616. Eurychilina granosa Ulrich. Cotypes. Stones River (Ord.). High Bridge, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 128, pl. 9, figs. 9-12.

41623. Eurychilina longula Ulrich. Cotypes. Stones River (Ord.). High Bridge, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 127, pl. 9, figs. 3a, 3b, 4.

41624. Eurychilina obesa Ulrich. Holotype. Stones River (Ord.). High Bridge, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 129, pl. 9, fig. 13.

44600. Eurychilina reticulata Ulrich. Cotypes and plesiotype.

Black River (Ord.). Minneapolis and Lanesboro, Minnesota.

Ulrich, Geol. Surv. Canada, Contr. Micro-Pal., Cambro-Sil., Pt. II, 1889, p. 52, pl. 9, figs. 9, 9a; Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 660, pl. 44, fig. 1.

41599. Eurychilina reticulata incurva Ulrich. Holotype.

Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 660, pl. 44, fig. 2.

- 41615. Eurychilina striatomarginata (Miller). Plesiotype. Richmond (Ord.). Eight miles north of Madison, Indiana.

  Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 130, pl. 9, fig. 14.
- 41628. Eurychilina? subæquata Ulrich. Holotype.
  Black River (Ord.). St. Paul, Minnesota.
  Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II,
  1894, p. 663, pl. 45, figs. 7-9.
- 41613. Eurychilina subradiata Ulrich. Cotypes.
  41614. Stones River (Ord.). Lebanon, Tennessee; Dixon, Illinois.

  Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 126, pl.
  9, figs. 1a-c; 2a-c.
- 41611. Eurychilina subradiata Ulrich. Plesiotypes.
  Stones River (Ord.). Minneapolis, Minnesota.
  Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 661, pl. 44, figs. 3, 4, 4a.
- 41386. Eurychilina (?) symmetrica Ulrich. Cotypes.
  Black River (Ord.). St. Paul, Minnesota.

  Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt.
  II, 1894, p. 663, pl. 44, figs. 5-7; pl. 45, figs. 4-6.
- 41625. Eurychilina ventrosa Ulrich. Cotype.
  Trenton (Ord.). Near Cannon Falls, Minnesota.
  Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 662, pl. 45, fig. 1.
  - 3664. Eurydesma cordata Morris. Plesiotype.
    Carboniferous. Harpers Hill on the Hunter, New South
    Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 700, Atlas, pl. 8, figs. 1, 1a.

3601. Eurydesma elliptica Dana. Holotype
Carboniferous. Harpers Hill on the Hunter, New South
Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 700, Atlas, pl. 7 figs. 6a-d.

3600. Eurydesma globosa Dana. Cotypes Carboniferous. District of Illawarra, New South Wales Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 700, Atlas, pl. 7 figs. 7, 7a.

3602. Eurydesma sacculus (M'Coy). Plesiotype Carboniferous. Harpers Hill on the Hunter, New South Wales, Australia.

> Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 700, Atlas, pl. 7 figs. 8a, 8b.

- 43754. Eurydictya calhounensis Ulrich. Figured sections o holotype
  Trenton (Ord.). Port au Grés, Calhoun County, Illinois
  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 520, pl. 30, figs. 4b, 4c.
- 43753. Eurydictya montifera Ulrich. Figured sections and fragmen of holotype Richmond (Ord.). Wilmington, Illinois.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 521, pl. 30, figs. 3b, 3c, 3d
- 43604. Eurydictya multipora (Hall'? Plesiotypes and figured sections
  Trenton (Ord.'). St. Paul, Minnesota.
  Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. 1

1893, p. 139, pl. 6, figs. 9-11; pl. 7, figs. 24, 29-31.

46202. Eurymya plana (Hall). Plesiotypes Stones River (Ord.). Minneapolis, Minnesota. Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I

1894, p. 512, pl. 36, figs. 27, 28.

- 46203. Eurymya subplana Ulrich. Cotype: Trenton (Ord.). Mercer County, Kentucky. Ulrich, Geol. and Nat. Hist, Surv. Minn., Final Rept., III, Pt. I 1894, p. 513.
- 25649. Eurystomites kelloggi (Whitfield). Plesiotype Beekmantown (Ord.). Fort Cassin, Vermont. Hyatt, Proc. Amer. Phil. Soc., XXXII, 1894, p. 442, pl. 5, figs. 4.
- 25655. Eurystomites rotundus Hyatt. Cotype
  Beekmantown Ord. Fort Cassin, Vermont.

  Hyatt Programmer Phil Son NYVII 1801 p. 442 pl. 5 66

Hyatt, Proc. Amer. Phil. Soc., XXXII, 1894, p. 443, pl. 5, fig 21-25. 9611. Eurystomites virginiana Hyatt. Holotype.
Beekmantown (Ord.). Near Lexington, Virginia.
Hyatt, Proc. Amer. Phil. Soc., XXXII, 1894, p. 444.

115395. **Euspatangus antillarum** Cotteau. Cotypes. Eocene. St. Bartholomew, West Indies.

Cotteau, Kongl. Svenska Vet-Akad. Hand., XIII, 6, 1874, p. 43, pl. 7, figs. 7-11.

Eocene. St. Bartholomew, West Indies.

Cotteau, Kongl. Svenska Vet-Akad. Hand., XIII, 6, 1874, p. 44, pl. 8, figs. 1-4.

Euspatangus grandiflorus Cotteau. Holotype. Eocene. St. Bartholomew, West Indies.

Cotteau, Kongl. Svenska Vet-Akad. Hand., XIII, 6, 1874, p. 45,

43391. Euspilopora? barrisi Ulrich. Cotypes and figured sections.
Middle Devonian. Buffalo, Iowa.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 526, pl. 43, figs. 5-5d.

43752. **Euspilopora serrata** Ulrich. Cotypes and figured sections. Middle Devonian. Buffalo, Iowa.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 526, pl. 43, figs. 4-4c, 4e-4h.

8068. Euspira coalvillensis (White). Cotypes. Colorado (Cret.). Coalville, Utah.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1877 (1879), p. 310, pl. 4, figs. 2a, 2b.

=Euspira utahensis.

pl. 8, figs. 5, 6.

12528. Eutomoceras laubei Meek. Cotypes.
Triassic. New Pass, Desatoya Mountains, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 126, pl. 10, figs. 8, 8a.

43383. Evactinopora quinqueradiata Ulrich. Holotype.
Burlington (Miss.). Burlington, Iowa.
Ulrich, Geol. Surv. Ill., VIII, 1890, p. 510, pl. 73, fig. 1.

43381. Evactinopora radiata Meek and Worthen. Plesiotypes. Keokuk (Miss.). Kings Mountain, Kentucky.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 509, pl. 73, figs. 3, 3a.

43382. Evactinopora sexradiata Meek and Worthen. Plesiotype. Burlington (Miss.). Burlington, Iowa.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 510, pl. 73, figs. 2-2b.

9609. **Exogyra aquila** Goldfuss. Plesiotypes. Cretaceous. Bexar County, **Texas**.

White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 304, pl. 53, figs. 1, 2.

9866. Exogyra arietina Roemer. Plesiotypes.
Washita (Lower Cret.). Leon Springs, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 153, pl. 7, figs. 1c-1e.—White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 303, pl. 56, figs. 3-5.

30227. Exogyra clarki Shattuck. Cotypes. Buda (Lower Cret.). Shoal Creek, Austin, Texas.

Shattuck, Bull. No. 205, U. S. Geol. Surv., 1903, p. 22, pls. 10, 11.

20254. Exogyra columbella Meek.

Cotype.

Colorado (Cret.). Covero, New Mexico.

Meek, Rept. Expl. Exped. Santa Fé to junction of Grand and Green Riv., Macomb, 1876, p. 124, pl. 1, fig. 3a.

See Exogyra costata fluminis.

20254. Exogyra columbella Meek. Cotype and plesiotypes.

8654. Colorado (Cret.). Covero, and near Casa Salazan, New Mexico.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 63, pl. 8, figs. 2-4.

See Exogyra costata fluminis.

1744. Exogyra costata Say.

Plesiotypes.

2213. Cretaceous. New Jersey.

White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 304, pl. 56, fig. 1; pl. 57, figs. 1, 2.

9879. Exogyra costata Say.

Plesiotypes.

Cretaceous. Jacun, three miles below Laredo, Texas.

Conrad, Rept. U. S. Mexican Bound, Surv., Emory, I, Pt. II, 1857, p. 154, pl. 9, figs. 2a, 2b; pl. 10, fig. 1. [Locality erroneous. T. W. Stanton.]

8654. Exogyra costata fluminis White. Cotypes. Colorado (Cret.). East bank Rio Puerco, six miles below

Casa Salazan, New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 174, pl. 17, figs. 32-3d.

= Exogyra columbella.

0864. Exogyra fimbriata Conrad.

Holotype.

Cretaceous. Western Texas.

Conrad, Rept. U. S. Mexican Bound, Surv., Emory, I, Pt. II, 1857, p. 154, pl. 7, figs. 2-2b.

8022. Exogyra forniculata White.

Cotypes.

Washita (Cret. . Bexar County, Texas.

White, Proc. U. S. Nat. Mus., II. 1870, p. 203, pl. 4, figs. 3, 4; Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 305, pl. 52, figs. 1, 2.

=Gryphæi miria

9844. Exogyra fragosa Conrad.

Fredericksburg (Lower Cret.). Between El Paso and Frontera, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 155, pl. 8, figs. 2a, 2b.

=Exogyra texana.

8646. Exogyra læviuscula Roemer. Plesiotypes. Colorado (Cret.). Linear Plateau, Southeast Utah.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 173, pl. 17, figs. 2a-2d; Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 305, pl. 52, fig. 5.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 64, pl. 8, figs. 5, 6.

9883. Exogyra matheroniana d'Orbigny. Plesiotypes. Cretaceous. Between El Paso and Frontera, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 154, pl. 8, figs. 1a-c.

=Exogyra texana.

13417. Exogyra ponderosa Roemer. Plesiotypes.
Colorado (Cret.). East of Impracticable Ridge, Utah.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876,
p. 172, pl. 14, figs. 1a-1c.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 65, pl. 7, figs. 1, 2.

22862. Exogyra suborbiculata (Lamarck). Plesiotypes. 22863. Colorado (Cret.). Malachite, and Huerfano Park, Colorado.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 62, pl. 5, fig. 6; pl. 6, figs. 1, 2; pl. 8, fig. 1.

8039. Exogyra walkeri White.

Cotypes.

Washita (Cret.). Salado, Bell County, Texas.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1877 (1879),
p. 278, pl. 1, figs. 1a, 1b (as E. valkeri); Fourth Ann. Rept.
U. S. Geol. Surv. 1884, p. 307, pl. 54, figs. 1, 2.

8021. Exogyra winchelli White. Cotypes. Cretaceous. Collin County, Texas.

White, Proc. U. S. Nat. Mus., II, 1879, p. 294, pl. 2, figs. 1, 2; pl. 3, figs. 1, 2; Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 307, pl. 52, figs. 6, 7; pl. 55, figs. 1, 2.

25500. Exomias obdurefactus Scudder. Cotypes.
Older Tertiary. Roan Mountains, Western Colorado.
Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 40, pl. 9, fig. 4.

129562. Falsifusus meyeri (Aldrich). Plesiotype. Eocene. Wilcox County, Alabama.

Grabau, Smithsonian Misc. Coll., XLIV, 1904, p. 81, pl. 17, fig. 9.

Faphrentis. See Zaphrentis.

8046. Fasciolaria (Piestocheilus) alleni White. Holotype.

Montana (Cret.). Valley of the Yellowstone River,

Montana.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 34, pl. 12, fig. 1a.

272. Fasciolaria buccinoides Meek and Hayden. Holotype and paratypes.

Fox Hills (Cret.). Moreau River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci., Phila., VIII, 1856, p. 67.—Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 358, pl. 31, figs. 8a-8d.

289. Fasciolaria? (Cryptorhytis) cheyennensis (Hall and Meek).
Plesiotypes.

Fort Pierre (Cret.). South Fork of Cheyenne River near Black Hills, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 365, pl. 19, figs. 13a, 13b.

12256. Fasciolaria (Cryptorhytis) contorta (Meek and Hayden).
Plesiotypes.

Montana (Cret.). Old Woman Fork of Cheyenne River, Wyoming.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 422, pl. 12, fig. 10.

258. Fasciolaria (Piestochilus) culbertsoni (Meek and Hayden).
Holotype and paratypes.

Fox Hills (Cret.). Moreau River, South Dakota.

Meck, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 360, pl. 32, fig. 18-1f.

See Fusus culbertsoni.

12204. Fasciolaria (Piestocheilus) culbertsoni Meek and Hayden). Plesiotypes.

Montana (Cret.). French Creek, Black Hills, South Pakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 423, pl. 12, fig. 11.

112255. Fasciolaria distans Lamarck. Plesiotype. Nest Piècene. De Leon Springs, Florida.

Pall, Trans Wagner Free Inst. Sci. Phila., III. Ph. L. 1890, p. 102, pl. 7, fig. 10

112501. Fasciolaria [distans subsp.] apicina Pall Cotypes. Phoene Shell Creek De Soto County Florida

Wall, Trans. Wagner Free Inc. Sci. Philo. III Pt. I 1800, p. 102, pt. 7, fig. 11h.

(gence Pascrolaria distans var i monocingulata Itali Cocypes. Physica Calessahatohic River were First Thompson. Physida.

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262. Fasciolaria? (Cryptorhytis) flexicostata (Meek and Hayden). Holotype and paratypes.

Fort Pierre (Cret.). Yellowstone River, near Miles City, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 367, pl. 19, fig. 2.

See Fusus flexuocostatus.

287. Fasciolaria (Piestochilus?) galpiniana (Meek and Hayden).

Holotype and paratype.

Fox Hills (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 362, pl. 32, figs. 2a, 2b.

See Fusus galpinianus.

259. Fasciolaria (Piestochilus) scarboroughi (Meek and Hayden). Holotype and paratypes.

Fox Hills (Cret.). Butte au Grés, Missouri River.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 359, pl. 32, figs. 4, 4a-d.

See Fusus (Pleurotoma?) scarboroughi.

112421. Fasciolaria (sparrowi var?) acuta (Emmons). Plesiotype. Miocene. Natural Well, Duplin County, North Carolina. Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 229, pl. 13, fig. 2.

111630. Fasciolaria (Lyrosoma) sulcosa (Conrad). Plesiotype. Miocene. Jericho, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 100, pl. 17, figs. 9, 10.

115482. **Fasciolaria textilis Guppy**. Holotype. Oligocene. Jamaica, British West Indies.

Guppy, Geol. Mag., London, Dec. II, I, 1874, p. 410, pl. 16, fig. 5.

112390. Fasciolaria tulipa Linnæus. Plesiotype. 135104. Pliocene. Shell Creek, De Soto County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 101, pl. 7, fig. 11.

22922. Fasciolaria? (Cryptorhytis) utahensis (Meek). Plesiotypes.
Colorado (Cret.). Poison Canyon, Huerfano Park, Colorado.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 153, pl. 32, figs. 3, 4.

See Fusus? utahensis.

22923. Fasciolaria? walcotti Stanton. Holot

Colorado (Cret.). Upper Kanab Valley, Utah.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 153, pl. 32, f

20127. Faunus marcidulus White. Holotype.

Chico (Cret.). Butte County, California.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 20, pl. 4, figs. 12, 13.

157519. Favia merriami Vaughan. Cotypes.

157521. Cretaceous?. Southern California.

158295. Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 142, pl. 15, figs. 5-5c.

15056. Faviphyllum? rugosum Hall. Cotypes. Upper Carboniferous. Stansburys Island, Great Salt Lake, Utah.

Hall, Stansbury's Expl. and Surv. Valley Great Salt Lake, Utah, 1852, p. 407, pl. 1, figs. 1a, 1b.

[The generic name Faviphyllum remains undefined.]

34115. Favosites conicus Hall. Plesiotypes.
Helderbergian (Lower Dev.). Atoka quadrangle, Indian
Territory.

Girty, Nineteenth Ann. Rept. U. S. Geol. Surv., 1900, p. 560.

8536. Favosites divergens Winchell. Plesiotype.
Lower Carboniferous. Ewells Spring, Arizona.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 79, pl. 5, fig. 4a.

- 10533. Favosites helderbergiæ præcedens Schuchert. Cotypes. Cobleskill (Sil.). Howes Cave, Schoharie, New York. Schuchert, Amer. Geol., xxxi, 1903, p. 164.
- 4751c. Fenestella ampla Lonsdale. Plesiotype.
  4753. Carboniferous. Glendon on the Hunter, New South
  Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 710, Atlas, pl. 11, figs, 1, 1a, (?2, 2a).

=Polypora ampla.

44081. Fenestella bellistriata Hall? Plesiotype and figured sections.

Waldron (Sil.). Waldron, Indiana. Ulrich, Geol. Surv. Ill., VIII, 1890, p. 331, pl. 54, fig. 2.

43493. Fenestella cavernosa Ulrich. Holotype. Waverly (Miss.). Sciotoville, Ohio.

Ulrich, Bull. Denison Univ., IV, 1888, p. 69, pl. 13, figs. 7-7b.

43758. Fenestella cestriensis Ulrich. Cotype and figured section. Chester (Miss.). Sloans Valley, Kentucky.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 547, pl. 51, figs. 5, 5a.

43352. Fenestella cingulata Ulrich. Cotype and figured sections. Keokuk (Miss.). Nauvoo, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 543, pl. 52, figs. 1-1d.

- 43355. Fenestella compressa Ulrich. Holotype. Keokuk (Miss.). Kings Mountain Tunnel, Kentucky.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 539, pl. 50, fig. 2a.
- 43359. Fenestella compressa nododorsalis Ulrich. Holotype. Keokuk (Miss.). Kings Mountain, Kentucky.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 540, pl. 50, fig. 2.
- 43357. Fenestella conradi Ulrich. Holotype.
  Upper Coal Measures. Near Red Oak, Iowa.
  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 553, pl. 52, figs. 8, 8a.
- 44080. Fenestella elevatipora Ulrich. Cotypes. Chester (Miss.). Chester, Illinois (Kaskaskia, Illinois, in error).

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 549, pl. 51, figs. 3, 3a.
- 43755. Fenestella exigua Ulrich. Holotype. Warsaw (Miss.). Monroe County, Illinois.
  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 545, pl. 51, figs. 1, 1a.
- 43356. Fenestella flexuosa Ulrich. Cotypes. Chester (Miss.). Sloans Valley, Kentucky.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 548, pl. 51, figs. 4-4c.
- 4751a. Fenestella fossula Lonsdale. Plesiotype.
  Carboniferous. Glendon on the Hunter, New South
  Wales, Australia.

  Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 710, Atlas, pl. 11,
- 43354. Fenestella funicula Ulrich. Holotype. Keokuk (Miss.). Keokuk, Iowa.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 542, pl. 51, fig. 6.

figs. 3, 3a, 3b.

- 43809. Fenestella herrickana Ulrich. Plastotypes. Waverly (Miss.). Licking County, Ohio.

  Ulrich, Bull. Denison Univ., IV, 1888, p. 63, pl. 13, figs. 2-2d.
- 43358. Fenestella inæqualis Ulrich. Figured sections and fragment of holotype.

  Upper Coal Measures. Sangamon County, Illinois.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 554, pl. 54, figs. 4, 4a.
- 4751. Fenestella internata Lonsdale. Plesiotypes.
  4751b. Carboniferous. Glendon on the Hunter, New South
  Wales, Australia.

  Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 710, Atlas, pl. 10,

figs. 13, 13a, 13b (?15).

- 4754. Fenestella media Dana. Holotype.
  Carboniferous. Glendon on the Hunter, New South
  Wales, Australia.
  - Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 710, Atlas, pl. 10, figs. 14, 14a.

43494. Fenestella meekana Ulrich. Holotype. Waverly (Miss.). Richfield, Ohio.

Ulrich, Bull. Denison Univ., IV, 1888, p. 64, pl. 13, figs. 1-1b.

17914. Fenestella milleri (?) Owen. Plesiotype. Middle Devonian. ? Iowa.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, pl. 3A, fig. 21.

44072. Fenestella modesta Ulrich. Plastotype. Coal Measures. Knox County, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 550, pl. 52, figs. 3-3b.

43349. Fenestella multispinosa Ulrich. Cotypes. 43350. Keokuk (Miss.). Kings Mountain, Kentucky; Keokuk, Iowa.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 540, pl. 50, figs. 3-3e.

43635. Fenestella oxfordensis Ulrich. Holotype.
Richmond (Ord.). Oxford, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 159, pl. 6, fig. 13.

=Fenestella granulosa.

- 43351. Fenestella regalis Ulrich. Cotypes and figured sections. Keokuk (Miss.). Kings Mountain Tunnel, Kentucky.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 538, pl. 50, figs. 1, 1a; pl. 54, fig. 5.
- 43495. Fenestella regalis macra Ulrich. . Holotype. Waverly (Miss.). Richfield, Ohio.

  Ulrich, Bull. Denison Univ. IV, 1888, p. 70, pl. 13, figs. 5, 5a.
- 43759. Fenestella rudis Ulrich. Cotypes.
  Keokuk (Miss.). Nauvoo, Illinois.
  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 537, pl. 49, figs. 3a-3d.
- 6530. Fenestella shumardi Prout? Plesiotypes.
  Upper Carboniferous. Nebraska City, Nebraska.

  Meek, Final Rept. U. S. Geol. Surv. Neb. (Hayden), 1872, p. 153, pl. 7, fig. 3a-c.

  = Fenestella perelegans.
- 43756. Fenestella tenax Ulrich. Cotypes.
  43757. Warsaw (Miss.). Monroe County, Illinois.
  Chester (Miss.). Sloans Valley, Kentucky.
  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 546, pl. 51, figs. 2-2e.

43353. Fenestella triserialis Ulrich. Cotypes and figured sections. Keokuk (Miss.). Kings Mountain, Kentucky.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 541, pl. 50, figs. 4, 4a.

43348. Fenestella vera Ulrich.

Cotypes.

Middle Devonian. Buffalo, Iowa.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 535, pl. 44, figs, 1, 1a; pl. 54, fig. 3.

43331. Fenestralia sancti-ludovici Prout. Plesiotype and figured sections.

Warsaw (Miss.). Warsaw, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 604, pl. 55, fig. 5.

43332. Fenestralia sancti-ludovici compacta Ulrich. Holotype. St. Louis (Miss.). Elizabethtown, Kentucky.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 605, pl. 59, fig. 1.

43760. Fenestrapora occidentalis Ulrich. Cotypes and figured sections.

Middle Devonian. Buffalo, Iowa.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 558, pl. 54, figs. 7-7e.

115509. Ficula carbasea Guppy. Holotype

115510. Miocene. Saranetta, Trinidad, and Jamaica, British West Indies.

Guppy, Quart. Journ. Geol Soc. London, XXII, 1866, p. 580, pl. 26, fig. 7.

44109. Filifascigera megaera Lonsdale.

Plesiotype.

Rancocas (Cret.). Vincentown, New Jersey.

Ulrich, Zittel's Text Book Paleontology, Eng. translation, I, 1900, p. 263, fig. 421.

23065. Fissurella bipunctata Stanton. Holotype.

Knoxville (Lower Cret.). Near Stephenson, Tehama
County, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 63, pl. 13, fig. 8.

1851. Fissurella crenulata Sowerby.

Plesiotype.

Post-tertiary. San Pedro, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, V, 1856, p. 326, pl. 5, fig. 44.

111661. Fissurella griscomi Conrad.

Plesiotype.

Miocene. Shiloh, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 136, pl. 24, figs. 11-14.

112702. Fissuridea caloosaënsis Dall.

Pliocene. Caloosahatchie River, near Fort Thompson,

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 427, pl. 21, fig. 6.

112704. Fissuridea carditella Dall. Holotype.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III., Pt. II, 1892, p. 427, pl. 21, fig. 11.

112692. **Fissuridea carolinensis** (Conrad). Plesiotypes. Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 425, pl. 21, fig. 7.

Oligocene. Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 426, pl. 23, fig. 21.

112697. Fissuridea nucula Dall. Cotypes.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 426, pl. 19, figs. 9, 12.

112510. Fistulana ocalana Dall.

Holotype.

Oligocene. Ocala, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 826, pl. 35, fig. 23.

43246. Fistulipora astrica Ulrich. Cotypes and figured sections.

Middle Devonian. Buffalo, Iowa.

Ulrich, Geol. Surv. of Ill., VIII, 1890, p. 477, pl. 47, figs. 5-5b pl. 48, fig. 3.

43243. Fistulipora carbonaria Ulrich. Holotype and figured section

Upper Coal Measures. Kansas City, Missouri.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VII, 1884, p. 45, pl. 3 figs. 1, 1a.

43284. Fistulipora (?) clausa Ulrich. Cotypes and figured sections Kaskaskia (Miss.). Sloans Valley, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VII, 1884, p. 47, pl. ; figs. 4, 4a, 4b.

= Meekopora clausa.

43286. **Fistulipora collina** Ulrich. Cotypes and figured sections Middle Devonian. Buffalo, Iowa.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 478, pl. 47, figs. 6, 6b; p 48, figs. 5, 5a.

=Cyclotrypa collina.

43290. Fistulipora communis Ulrich. Cotypes and figured sections.

Middle Devonian. Buffalo, Iowa.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 476, pl. 48, figs. 1, 1a.

=Cyclotrypa communis.

43245. Fistulipera (Dichotrypa?) corrugata Ulrich. Figured sections and fragment of holotype.

Traverse (Dev.). Thunder Bay, Michigan.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 480, pl. 48, figs. 6-6b.

43247. Fistulipora excelens Ulrich. Cotypes and figured sections. Chester (Miss.). Sloans Valley (Tateville), Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VII, 1884, p. 46, pl. 3, figs. 3, 3a-b.

44110. Fistulipora flabellata Ulrich. Holotype. Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 28, pl. 7, figs. 26-26b.

=Chiloporella flabellata.

43240. Fistulipora foordi Ulrich. Holotype and figured sections. Upper Devonian. Rockford, Iowa.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 479, pl. 47, figs. 7-7a; pl. 48, figs. 4-4a.

43241. Fistulipora? laxata Ulrich. Figured sections and fragment of holotype.

Trenton (Ord.). St. Andrews, Manitoba.

Ulrich, Geol. Surv. Canada, Contr. Micro-Pal., Cambro-Sil., Pt. II, 1889, p. 37, pl. 8, figs. 2, 2a.

=Bythotrypa laxata.

43248. Fistulipora monticulata Ulrich.

Cotypes and figured sections.

Middle Devonian. Buffalo, Iowa.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 477, pl. 47, fig. 3a; pl. 48, figs. 2, 2a.

6554. **Fistulipora nodulifera Meek.** Cotypes. Upper Carboniferous. Rockford, near Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Neb. (Hayden), 1872, p. 143, pl. 5, figs. 5a-d.

43242. Fistulipora prolifica Ulrich. Holotype and figured sections. St. Louis (Miss.). Near Colesburg, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VII, 1884, p. 45, pl. 3, figs. 2, 2a.

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112018. Fulgur echinatum Dall. Holotype.
Pliocene. Near Fort Thompson, Caloosahatchie River,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 117, pl. 9, fig. 2.

20117. Fulgur hilgardi White. Cotypes. Chico (Cret.). Near Pences Ranch, Butte County, California.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 22, pl. 3, figs. 2, 3.

Oligocene. Alum Bluff, Chattahoochee River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 115.

Oligocene. Alum Bluff, Chattahoochee River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 113.

112028. Fulgur (pyrum var.?) planulatum Dall. Holotype.
Pliocene. Near Fort Thompson, Caloosahatchie River,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 114.

112036. Fulgur spiniger burnsii Dall. Cotypes.
112037. Oligocene. Alum Bluff, and near Baileys Ferry, Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 110.

Oligocene. Near Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 110.

Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 111.

112039. Fulgur spiniger spiniger (Conrad). Plesiotypes.
Oligocene. Near Chipola River, Florida.
Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 110.

Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 111.

Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 114, pl. 4, fig. 9.

20112. Fulguraria gabbi White. Cotype. Chico (Cret.). Centerville, Butte County, California.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 23, pl. 3, fig. 1.

= Rostellites gabbi.

45811. Fusispira angusta Ulrich and Scofield. Cotypes.
Trenton (Ord.). Goodhue County, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1079, pl. 81, figs. 28-31.

45812. Fusispira angusta subplana Ulrich and Scofield. Cotypes. Trenton (Ord.). Near Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1079, pl. 81, fig. 32.

17365. Fusispira compacta Hall and Whitfield. Holotype.
Pogonip (Ord.). Pogonip Mountain, White Pine District, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 236, pl. 1, fig. 25.

45813. Fusispira convexa Ulrich and Scofield. Cotypes.
45814. Trenton (Ord.). Trenton Falls, New York; Goodhue
County, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1077, pl. 80, figs. 8-10.

45815. **Fusispira** inflata Meek and Worthen. Plesiotypes. 45816. Trenton (Ord.). Kenyon and Hader, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1075, pl. 80, figs. 17, 18.

45817. Fusispira intermedia Ulrich and Scofield. Cotype.
Trenton (Ord.). Stewartsville, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1076, pl. 80, figs. 20, 21.

45818. Fusispira nobilis Ulrich and Scofield. Cotypes.

Trenton (Ord.). Wykoff, Minnesota.

Ulrich and Scofield Geol, and Not. Hist. Surv. Minn. Final

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1078, pl. 80, figs. 2-4.

45819. Fusispira planulata Ulrich and Scofield. Holotype. Trenton (Ord.). Eagle Point, Iowa.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1078, pl. 81, figs. 26, 27.

45820. Fusispira subbrevis Ulrich and Scofield. Cotype.
Trenton (Ord.). Goodhue County, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1076, pl. 80, figs. 11, 12.

45821. Fusispira subfusiformis Hall. Plesiotype. Trenton (Ord.). Goodhue County, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1077, pl. 81, figs. 38, 39.

45822. Fusispira sulcata Ulrich. Holotype. Utica (Ord.). Rogers Gap, Scott County, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, pl. 80, figs. 5-7.

1029. Fusulina cylindrica Fischer. Plesiotypes. Upper Carboniferous. Juniata, Kansas.

Meek and Hayden, Proc. Acad. Nat. Sci., Phila., for 1858, p. 260; Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 14, pl. 1, figs. 6a-6i.

See Fusulina cylindrica ventricosa.

6575. Fusulina cylindrica Fischer. Plesiotype.
Upper Carboniferous. Near Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Nebr. (Hayden), 1872,
p. 140, pl. 5, figs. 3a, 3b.

8495. Fusulina cylindrica Fischer. Plesiotypes. 11633. Upper Carboniferous. Various localities in Utah.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. 1, 1876, p. 96, pl. 6, figs. 6a, 6b.

1020. Fusulina cylindrica ventricosa Meek and Hayden.

Cotypes.

Upper Carboniferous. Juniata, on Blue River, Kansas.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1858, p. 261.

Fusulina evlindrica.

Fusus sp. Owen 😅 Mazzalina oweni.

112052. Fusus (Fusus) ballista Dall. Holotype. Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 127, pl. S. fig. 4.

organ Fusus (Fusus burnsii Pall. Holotype. Miocene. Petersburg, Virginia.

16.11. Prans Wagner Free Inst. Sci. Phila., III. Pt. I. 1890, p. 136.

See Heilprinia burnsii.

1132A Fusus caloosaensis Heilprin Plesiotypes.

Phoreno Shell Creek, De Soto County Florida.

Pall, Pane Wagner Pres Inst Sci. Phila. III. Pt. II. 1892. p. 484 pl. 14 fig. 3

See Heriprinia culturaenses.

Pliocene. Tillys Lake, Waccamaw River, South Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892,
p. 234, pl. 14, fig. 4a.

See Heilprinia caloosaënsis carolinensis.

12304. Fusus cheyennensis Whitfield. Holotype.
Fort Pierre (Cret.). Cheyenne River, near Rapid Creek,
Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 424, pl. 12, fig. 9.

271. Fusus contortus Meek and Hayden. Holotype and paratypes.

Fox Hills (Cret.). Moreau River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila, VIII, 1856, p. 65.

=Turris (Surcula?) contortus.

3551. Fusus corpulentus Conrad.
Miocene. Astoria, Oregon.

Holotype.

Conrad, Wilkes U. S. Expl. Exped., 1849, p. 728, Atlas, pl. 20, fig. 4.—Dall, Proc. U. S. Nat. Mus., Vol. XIV, 1891, p. 179.

258. Fusus culbertsoni Meek and Hayden. Holotype and paratypes.

Fox Hills (Cret.). Moreau River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 66.

= Fasciolaria (Piestochilus) culbertsoni.

256. Fusus dakotaensis Meek and Hayden. Holotype and paratypes.

Fox Hills (Cret.). Moreau River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 65.

= Fusus (Serrifusus) dakotensis.

256. Fusus (Serrifusus) dakotensis (Meek and Hayden).
Holotype and paratypes.

Fox Hills (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, pp. 374-375, pl. 31, fig. 11d; pl. 32, figs. 6a, 6b (7a, var.).

See Fusus dakotaensis.

112051. Fusus (Papillina) dumosus (Conrad). Plesiotype. Oligocene. Ocala, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 125, pl. 10, fig. 6a.

112381. Fusus (Fusus) equalis (Emmons). Plesiotype.
Miocene. Natural Well, Duplin County, North Carolina.
Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 126;

Pt. II, 1892, p. 234, pl. 14, fig. 3b.

See Heilprinia equalis.

262. Fusus flexuocostatus Meek and Hayden. Cotypes.

Montana (Cret.). Yellowstone River, near Miles City,
Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 66.

- Fasciolaria (Cryptorhytis) flexicostata.

7886. Fusus (Neptunea?) gabbi Meek. Cotypes. Colorado (Cret.). Coalville, Utah.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 504.— White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879, p. 317, pl. 9, fig. 9a.

=Fusus gabbi.

7886. Fusus gabbi Meek.

Cotypes.

Colorado (Cret.). Coalville, Utah.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 151, pl. 31, fig. 14.

See Fusus (Neptunea?) gabbi.

287. Fusus galpinianus Meek and Hayden. Holotype. Fox Hills (Cret.). Moreau River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 65. = Fasciolaria (Piestochilus) galpiniana.

253. Fusus intertextus Meek and Hayden. Holotype.
Montana (Cret.). Yellowstone River, near Miles City,
Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1857, p. 139. = Pyrifusus (Neptunella) intertextus.

8917. Fusus marnochi Heilprin.

Holotype.

Eocene. Atascosa County, Texas.

Heilprin, Proc. U. S. Nat. Mus., III, 1880, p. 151. pl. on p. 150, fig. 6.

147035. Fusus montgomeriensis Vaughan. Holotype. Jacksonian (Eocene). Montgomery, Louisiana.

Vaughan, Bull. No. 142, U. S. Geol. Surv., 1897, p. 35, pl. 3, fig. 2.

257. Fusus newberryi Meek and Hayden. Holotype and paratypes.

Fox Hills (Cret.). Moreau River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 66.

== Pyrifusus (Neptunella) newberryi.

112054. Fusus (Chrysodomus?) nexilis Dall. Cotypes. Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 128, pl. 8, fig. 4 [6]. 112053. Fusus? quinquespinus Dall. Holotype. Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 128; Pt. II, 1892, p. 234, pl. 20, fig. 8.

259. Fusus (Pleurotoma?) scarboroughi Meek and Hayden. Holotype and paratypes.

Fox Hills (Cret.). Butte au Grés, Missouri River.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1857, p.139.

= Fasciolaria (Piestocheilus) scarboroughi.

12305. Fusus shumardi Hall and Meek. Plesiotype.
Fort Benton (Cret.). East Fork of Beaver Creek, Black
Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 424, pl. 12, figs. 7, 8.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 150, pl. 31, fig. 13.

254. Fusus subturritus Meek and Hayden. Holotype.
Fort Pierre (Cret.). Near Grand River, South Dakota.
Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1857, p. 139.

= Pyrifusus (Neptunella) subturritus.

7885. Fusus (Neptunea?) utahensis Meek. Cotype. Colorado (Cret.). Coalville, Utah.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 505.

= Fasciolaria? (Cryptorhytis) utahensis. See Fusus utahensis.

7885. Fusus? utahensis (Meek). Cotype. Colorado (Cret.). Coalville, Utah.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 34, pl. 12, fig. 2a.

= Fasciolaria? (Cryptorhytis) utahensis. See Fusus (Neptunea?) utahensis.

255. Fusus vaughani Meek and Hayden. Holotype. Fox Hills (Cret.). Near mouth of Heart River, North Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1857, p. 138. — Cantharus (Cantharulus) vaughani.

22921. Fusus (Neptunea?) venenatus Stanton. Cotypes. Colorado (Cret.). Huerfano Park, Colorado.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 152, pl. 32, figs. 1, 2.

Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1
p. 1249, pl. 57, fig. 5.

114721. Gafrarium (Gouldia) erosum Dall. Holotype.
Oligocene. Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1248, pl. 57, fig. 10.

3498. Galerites oregonensis Dana.

Cotypes.

Miocene. Astoria, Oregon.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 729, pl. 21, figs. 5, 6a.

26439. Gastrioceras branneri Smith. Holotype.
Lower Coal Measures. Pilot Mountain, Carroll County,
Arkansas.

Smith, Proc. Amer. Phil. Soc., XXXV, 1897, p. 257, pl. 23, figs. 1-6; Mon. XLII, U. S. Geol. Surv., 1903, p. 83, pl. 11, figs. 8-13.

23872. Gastrioceras compressum Hyatt. Cotypes.
Upper Carboniferous?. Colorado River near Bend, San
Saba County, Texas.

Hyatt, Second Ann. Rept. Geol. Surv. Texas, 1891, p. 355, text figs. 57-59.—Smith, Mon. XLII, U. S. Geol. Surv., 1903, p. 86, pl. 9, figs. 1-3.

35090. Gastrioceras globulosum (Meek and Worthen). Plesiotype. Upper Coal Measures. Graham, Texas.

Smith, Mon. XLII, U. S. Geol. Surv., 1903, p. 89, pl. 21, figs. 7-9.

14176. Gastrioceras kingi (Hall and Whitfield). Cotypes.

Lower Carboniferous? Near Eberhardt Mills, White
Pine District, Nevada.

Smith, Mon. XLII, U. S. Geol. Surv., 1903, p. 92, pl. 4, figs. 4-8. See Goniatites kingi.

135742. Gastrochæna ovata rotunda Dall.
Oligocene. Bowden, Jamaica.

Cotypes.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 825.

73295. Gemma gemma (Totten). Plesiotype.
Pleistocene. Massachusetts Bay at Point Shirley.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1331.

See Gemma purpurea totteni.

61170. Gemma gemma purpurea (Lea). Plesiotypes.

Pleistocene. Texas coast at Corpus Christi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1332.

See Gemma purpurea.

115174. Gemma magna Dall. Holotype.

Miocene. Duplin County, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1330, pl. 57, fig. 4.

144643. Gemma magna virginiana Dall.

Cotypes.

Miocene. Yorktown, Virginia.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1330.

61170. Gemma purpurea (Lea). Plesiotypes.

Pleistocene. Texas coast at Corpus Christi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, pl. 24, figs. 2, 4, 4b.

=Gemma gemma purpurea.

73295. Gemma purpurea totteni Dall. Plesiotype.
Pleistocene. Massachusetts Bay at Point Shirley.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898,

pl. 24, figs. 1–3. See Gemma gemma.

114915. Gemma trigona Dall.

Holotype.

Miocene. Duplin County, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1330, pl. 57, fig. 8.

38135. Genentomum validum Scudder. Holotype.
Upper Coal Measures. Mazon Creek, Grundy County,
. Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1885, p. 329, pl. 30, figs. 2, 3; Foss. Insects N. America I, 1890, p. 293, pl. 16, figs. 2, 3.

26470. Gennæocrinus arkonensis Whiteaves. Cotypes. Hamilton (Dev.). Bartletts Mills, Ontario, Canada.

Whiteaves, Cont. to Canadian Pal., I, Pt. V, 1898, pp. 373, 374.

35149. Gennæocrinus kentuckiensis (Shumard). Plesiotype. Hamilton (Dev.). Beargrass quarry, Louisville, Kentucky. Wood, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 80, text fig. 9.

38148. Genopteryx constricts Scudder. Holotype.
Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1885, p. 327, pl. 29, fig. 11; Foss. Insects N. America, I, 1890, p. 291, pl. 15, fig. 11.

38065. **Gerablattina abdicata** Scudder. Holotype. Lower Permian. Cassville, West Virginia.

Caulder Bull No ret U.S. Cool Surv. 1905

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 118, pl. 10, fig. 6.

38176. Gerablattina cassivici Scudder. Cotypes. Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 117, pl. 10, figs. 2, 3.

38172. Gerablattina concinna Scudder. Cotypes.

Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 119, pl. 10, figs. 4, 5.

38063. Gerablattina deducta Scudder. Holotype.

Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 123, pl. 10, fig. 15.

38062. **Gerablattina diversinervis** Scudder. Holotype. Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 115, pl. 9, fig. 15.

38066. Gerablattina eversa Scudder. Holotype.

Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 112, pl. 10, fig. 14.

38058. Gerablattina fascigera Scudder. Cotypes. Upper Coal Measures. Campbells Ledge, near Pittston, Pennsylvania.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1879, p. 113, pl. 6, figs. 1, 2; Foss. Insects N. America, I, 1890, p. 133, pl. 6, figs. 1, 2.

38059. Gerablattina fraterna Scudder. Holotype. Coal Measures. East Providence, Rhode Island.

Scudder, Bull. No. 101, U. S. Geol. Surv., 1893, p. 19, pl. 2, figs. d, f; ibid., No. 124, 1895, p. 124, pl. 10, fig. 16.

38173. Gerablattina inculta Scudder. Holotype.

Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 113, pl. 9, fig. 16.

38174. Gerablattina lata Scudder. Holotype.

Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 125, pl. 11, fig. 2.

38170. Gerablattina ovata Scudder. Holotype.

Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 126, pl. 11, fig. 4.

38001. Gerablattina perita Scudder. Holotype.

Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 114, pl. 9, fig. 17.

38064. Gerablattina permanenta Scudder. Holotype.
Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 124, pl. 10, fig. 12.

38175. **Gerablattina radiata** Scudder. Holotype. Lower Permian. **Cass**ville, **West** Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 124, pl. 11, fig. 1.

38171. Gerablattina rotundata Scudder. Holotype.
Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 126, pl. 11, fig. 3.

38060. Gerablattina scapularis Scudder. Holotype.

Coal Measures. Pawtucket, Rhode Island.

Scudder, Bull. No. 101, U. S. Geol. Surv., 1893, p. 19, pl. 2, fig. l; ibid., No. 124, 1895, p. 124, pl. 10, fig. 7.

38177. Gerablattina uniformis Scudder. Cotypes. Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 120, pl. 10, figs. 8-11.

37985. Geralinura carbonaria Scudder. Cotypes. Upper Coal Measures. Mazon Creek, Grundy County, Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, p. 455, pl. 39, figs. 1, 3, 4; Foss. Insects N. America, 1890, p. 431, pl. 31, figs. 1, 3, 4.

37961. Geraphrynus carbonarius Scudder. Cotypes.
Upper Coal Measures. Mazon Creek, Grundy County,
Illinois

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, p. 446, pl. 40, figs. 1, 9, 10, 12; Foss. Insects N. America, 1890, p. 423, pl. 32, figs. 1, 9, 10, 12.

37970. Geraphrynus (Architarbus) elongatus (Scudder).

Holotype.

Upper Coal Measures. Braidwood, Illinois.

Fritsch, Pal. Arachniden, 1904, p. 33, text fig. 37.

See Architarbus elongatus.

38141. Gerapompus extensus Scudder. Holotype.
Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1885, p. 326, p<sup>1</sup> figs. 5, 8; Foss. Insects N. America, I, 1890, p. 290, j figs. 5, 8.

38136. Gerarus vetus Scudder. Holotype.
Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1885, p. 344, pl. 31, fig. 6; Foss. Insects N. America, I, 1890, p. 308, pl. 17, fig. 6.

41951. Gerasaphes ulrichana Clarke. Holotype. Trenton (Ord.). Covington, Kentucky.

Clarke, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 710, figs. 14-16.

37966. **Geratarbus lacoei** Scudder. Holotype. Upper Coal Measures. Mazon Creek, Grundy County, Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, p. 448, pl. 40, fig. 11; Foss. Insects N. America, 1890, p. 424, pl. 32, fig. 11.

37965. **Geratarbus scabrum** Scudder. Holotype. Upper Coal Measures. Mazon Creek, Grundy County, Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, p. 448, pl. 30, fig. 5; Foss. Insects N. America, 1890, p. 430, pl. 31, fig. 5.

21698. Gervillia longa Geinitz. Plesiotype.
Permian. Godwin Creek, Baylor County, Texas.
White, Bull. No. 77, U. S. Geol. Surv., 1891, p. 29, pl. 4, fig. 2.

7795. Gervillia montanaensis Meek. Cotypes.

Jurassic. Near Lower Canyon of Yellowstone River,

Montana.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 145, pl. 37, figs. 1a, 1b.

8023. Gervillia mudgeana White. Cotypes.
Mentor (Cret.). Saline County, Kansas.

White, Proc. U. S. Nat. Mus., II, 1879, p. 295, pl. 5, figs. 3, 4; Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1883, p. 16, pl. 14, figs. 3a, b.

22867. Gervillia propleura (Meek). Plesiotypes.
Colorado (Cret.). Coalville, Utah and Huerfano Park,
Colorado.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 74, pl. 10, figs. 1-3.
See Avicula (Pseudoptera) propleura, A. (P.) rhytophora, and Pteria (Pseudopteria) propleura.

7843. Gervillia recta Meek and Hayden. Holotype and paratypes. Fox Hills (Cret.). Deer Creek, near North Platte, Wyoming.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1861, p. 441.— Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 66, pl. 29, figs. 1a, 1b. 12319. Gervillia recta Meek. Plesiotype.

Jurassic. Near Sun Dance Hills, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 358, pl. 4, fig. 3.

356. **Gerv**illia subtortuosa Meek and Hayden. Holotype and paratype.

Fort Pierre (Cret.). Missouri River, east of Fort Benton, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 276.—Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 65, pl. 16, figs. 7a-c.

30220. Gervilliopsis invaginata (?) White. Plesiotype. Buda (Lower Cret.). Shoal Creek, Austin, Texas.

Shattuck, Bull. No. 205, U. S. Geol. Surv., 1903, p. 19, pl. 5, fig. 12.

113010. Gibbula americana Dall. Holotype.
Miocene. Near Natural Well, Duplin County, North
Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 389, pl. 22, fig. 32.

39970. Gilbertsocrinites americanus Troost. Chirotypes. Ordovician. Near Knoxville, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 61.

8249. Glauconia coalvillensis (Meek). Plesiotypes.

8633. Colorado (Cret.). Coalville, Utah.

18946. Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 132, pl. 28, fig. 11; pl. 29, figs. 1, 2.

See Cassiope whitfieldi and Turritella coalvillensis.

8518. Glauconome nereides White. Cotypes.

Upper Carboniferous. Confluence of White Mountain and
Black rivers, Arizona.

White, Prelim. Rept. U. S. Geogr. Surv., W. 100th Merid., 8vo., 1874, p. 18; Rept. U. S. Geogr. Surv., W. 100th Merid., IV, Pt.I, 1877, p. 105, pl. 7, figs. 5a-e.

= Pinnatopora nereides.

Glycimeris. See Glycymeris.

8051. Glycymeris berthoudi White. Holotype.

Fort Pierre (Cret.). Fifteen miles west of Greeley, Colorado.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879, p. 299, pl. 6, figs. 1a, 1b.

20090. Glycymeris? dalli White.

Cotyp--

Jurassic. Wrangel Bay, Alaska.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 66, pl. 14, figs.

114941. Glycymeris duplinensis Dall. Cotypes.
Miocene. Magnolia, Duplin County, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III. Pt. IV, 1898, p. 613, pl. 34, figs. 6, 7.

13320. Glycymeris estrellanus Conrad. Holotype. Miocene. Panza and Estrella valleys, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 194, pl. 7, fig. 5.

115671. Glycymeris jamaicensis Dall.

Cotypes.

Oligocene. Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 608.

180. Glycymeris occidentalis (Meek and Hayden). Holotype. Fox Hills (Cret.). Mouth of Judith River, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 250, pl. 39, figs. 9a, 9b.

See Panopea occidentalis.

113177. Glyphostoma johnsoni Dall.

Holotype.

Miocene. Cape Fear River, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 223, pl. 14, fig. 6.

163977. Glyphostoma scoptes Dall.

Holotype.

Pliocene. Shell Creek, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 60, fig. 15.

97343. Glyphostoma watsoni Dall. Holotype.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 40, pl. 2, fig. 7.

35409. Glyptocrinus decadactylus Hall.

Plesiotype.

Lorraine (Ord.). Covington, Kentucky.

Hayes and Ulrich, U. S. Geol. Surv., Folio 95, 1903, illustration sheet, fig. 16.

40768. Glyptocrinus decadactylus Hall. Plesiotypes.

42342. Lorraine (Ord.). Morrow, Ohio; Covington, Kentucky;

42343. Cincinnati, Ohio.

Wachsmuth and Springer, North Amer. Crinoidea Camerata, Mem. Mus. Comp. Zool., XXI, 1897, p. 270, pl. 20, figs. 4b, 4c; pl. 21, fig. 4a.

40762. Glyptocrinus dyeri Meek. Plesiotypes.

40767. Lorraine (Ord.). Jefferson County, Indiana; Cincinnati, .

42214. Ohio.

Wachsmuth and Springer, North Amer. Crinoidea Camerata, Mem. Mus. Comp. Zool., XXI, 1897, p. 271, pl. 20, figs. 1a, 1c; pl. 21, figs. 3a-c, 6.

40771. Glyptocrinus ? fornshelli Miller. Plesiotype.

Richmond (Ord.). Waynesville, Ohio.

Wachsmuth and Springer, North Amer. Crinoidea Camerata, Mem. Mus. Comp. Zool., XXI, 1897, p. 267, pl. 20, fig. 3; pl. 21, fig. 5.

40759. Glyptocrinus harrisi Miller.

Holotype.

Richmond (Ord.). Waynesville, Ohio.

Miller, Journ. Cincinnati Soc. Nat. Hist., IV, 1881, p. 74, pl. 1, figs. 4, 4a.

See Compsocrinus harrisi.

40760. Glyptocrinus miamiensis Miller.

Holotype.

Richmond (Ord.). Waynesville, Ohio.

Miller, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 34, pl. 1, fig. 1.

See Compsocrinus miamiensis.

42145. Glyptocrinus nealli Hall.

Cotype.

Richmond (Ord.). Warren County, Ohio.

Hall, Twenty-fourth Rept. New York State Cab. Nat. Hist., 1872, p. 206, pl. 5, fig. 19.

= Reteocrinus nealli.

40772. Glyptocrinus sculptus Miller.

Cotypes.

Richmond (Ord.). Waynesville, Ohio.

Miller, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 37, pl. 1, fig. 2.

=Rhaphanocrinus sculptus.

44094. Glyptopora elegans (Prout). Cotype and figured sections. Warsaw (Miss.). Warsaw, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 518, pl. 78, figs. 10a-10e.

43379. Glyptopora keyserlingi (Prout).

Plesiotype.

Keokuk (Miss.). Nauvoo, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, pl. 78, figs. 4-4b.

43436. Glyptopora megastoma Ulrich.

Holotype.

Keokuk (Miss.). Keokuk, Iowa.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 518, pl. 78, figs. 5, 5a.

= Phractopora megastoma.

43761. Glyptopora plumosa (Prout).

Plesiotype.

Warsaw (Miss.). Warsaw, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 512, pl. 78, figs. 3b, 3c.

43762. Glyptopora punctipora Ulrich. Figured fragment of • holot

Chester (Miss.). Monroe County, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 519, pl. 78, figs. 9, 98

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43380. Glyptopora saganella caliculosa Ulrich. Coty Warsaw (Miss.). Warsaw, Illinois. Ulrich, Geol. Surv. Ill., VIII, 1890, p. 514.

Eocene. Vamos-Vamos Station, Panama Canal, Colom
Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1
p. 233, pl. 13, fig. 5.

Plesioty
Pliocene. Neuse River, North Carolina.

Dall, Proc. U. S. Nat. Mus., XVII, 1894, p. 99, pl. 7, fig. 9.

= Rangia clathrondonta.

106986. Gnathodon cuneatus Gray. Plesioty
Pliocene. Caloosahatchie River, Florida.

Dall, Proc. U. S. Nat. Mus., XVII, 1894, p. 97, pl. 7, figs. 1,

= Rangia cuneata.

107033. Gnathodon johnsoni Dall. Holot Miocene. Near Virnal, Mississippi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 189, 337, pl. 22, fig. 18; Proc. U. S. Nat. Mus., XVII, 1894, p. pl. 7, fig. 7.

= Rangia johnsoni.

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6833. Gnathodon lecontei Conrad. Holot Pliocene. Carisco Creek, Colorado Desert, Arizona. Dall, Proc. U. S. Nat. Mus., XVII, 1894; p. 100, pl. 7, fig. 4 = Rangia lecontei.

13984. Gomphoceras suboviforme Walcott. Holot Upper Devonian. The Gate, Eureka District, Nevad Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 20, pl. 17, S. Sa.

21706. Goniatites baylorensis White. Holot Permian. Military Crossing of the Big Wichita, Ba County, Texas.

White, Bull. No. 77, U. S. Geol. Surv. 1891, p. 19. pl. 2, figs = Paralegoceras baylorensis.

Middle Devonian. Combs Peak, Eureka District, Nev Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 203, pl. 17, fi

33275. Goniatites globulosus excelsus Meek. Holot Upper Carboniferous. Near Osage, Kansas.

Meek, Bull. No. 6, U. S. Geol. Surv. Terr., I, 1875, p. 445.

= Gastrioceras excelsum.

14176. Goniatites kingii Hall and Whitfield.

Cotypes.

Lower Carboniferous?. Near Eberhardt Mills, White Pine District, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 279, pl. 6, figs. 9-14.

=Gastrioceras kingii.

14993. Goniatites lutheri Clarke.

Holotype.

Naples (Dev.). Parish Gully, Naples, New York.

Clarke, Bull. No. 16, U. S. Geol. Surv., 1885, p. 50, pl. 2, fig. 8.

= Probeloceras lutheri.

14994. Goniatites nodifer Clarke.

Cotypes.

Genesee (Dev.). Genundewah, Canandaigua Lake, New York.

Clarke, Bull. No. 16, U. S. Geol. Surv., 1885, p. 21.

= Manticoceras nodifer.

606. Goniobasis arcta (Meek).

Cotype.

Eocene. Ham's Fork, northeast of Fort Bridger, Wyoming.

Meek, Rept. Expl. Great Basin of Utah, Simpson, 1876, p. 366, pl. 5, fig. 5.

See Melania arcta.

8153. Goniobasis chrysallis Meek.

Cotypes.

Bear River (Cret.). Near Sulphur Creek, Bear River, Utah.

Meek, Fourth Ann. Rept. U. S. Geol. Surv. Terr., 1871, p. 316.— White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 91, pl. 30, figs. 6a, 6b; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 462, pl. 6. figs. 13, 14.

= Pachymelania chrysallis.

8157. Goniobasis chrysalloidea White.

Cotypes.

Bear River (Cret.). Sulphur Creek, Bear River Valley, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 92, pl. 30, figs. 5a, 5b; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 462, pl. 6, figs. 10, 11.

= Pachymelania chrysalloidea.

8152. Goniobasis cleburni White.

Cotypes.

Bear River (Cret.). Sulphur Creek, Bear River Valley, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 18 p. 91, pl. 30, figs. 4a-d; Third Ann. Rept. U. S. Geol. Sur 1883, p. 462, pl. 6, figs. 7-9.

= Pachymelania cleburni.

2142. Goniobasis convexa (Meek and Hayden). Holotype and paratypes.

Laramie (Cret.). Mouth of Judith River, Montana

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 562, text fig. 71, pl. 42, figs. 2a, 2b.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 463, pl. 26, figs. 6, 7.

See Melania convexa.

2143. Goniobasis convexa impressa (Meek and Hayden).

Holotype.

Laramie (Cret.). Mouth of Judith River, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 563, pl. 42, figs. 2c, 2d.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 463, pl. 26, figs. 8, 9.

8161. Goniobasis endlichi White.

Cotypes.

Bear River (Cret.). Seven miles north of Evanston, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 92, pl. 30, figs. 7a-c; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 463, pl. 7, figs. 7-9.

=Lioplax endlichi.

20077. Goniobasis filifera White.

Cotypes.

Eocene. Wales, Utah.

White, Bull. No. 34, U. S. Geol. Surv., 1886, p. 29, pl. 2, fig. 3.

8203. Goniobasis gracilenta Meek. Holotype and plesiotype. 12482. Laramie (Cret.). Mouth of Judith River. Montana.

Meek, Rept. U. S. Geol, Surv. Terr., IX, 1876, p. 568, pl. 42, fig. 3; and text fig. 74 on p. 560.—White, Third Ann. Rept. U. S. Geol, Surv., 1883, p. 463, pl. 26, figs. 12, 13.

2848. Goniobasis?increbescens Stanton. Holotype and paratypes. Pakota Cret. Fawn Creek. Vellowstone National Park.

Stanton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 633, pl. 75, fig. 7.

S127. Goniobasis? insculpta Meek.

Cotypes.

Laramie Cret. Rock Spring, Wyoming,

Meck, Sixth Ann. Rept. U. S. Geol, Surv. Terr., 1873., p. 515. 

Melania insculpta.

2144. Goniobasis invenusta Meek and Havden.

Holotype and paratypes.

Laramie Cret. Month of Indith River. Montana.

Meck, Rept. U.S. Good, Sam. Terr. IX, 1970, p. 554, pl. 42, figs. 14, h. d. e.—White, Tharf Ann. Rept. U.S. Good, Sarv., 1984, p. 494, pl. 35, fig. 17.

See Melania inventista

agram Gomiobasis jestersomensis White.

Passerve

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White Proc. I S No. No. No. NY 1964 p. 1964 pt. S. Eg. 4

19016. Goniobasis macilenta White. Holotype. Bear River (Cret.). Sulphur Creek, Bear River Valley, Wyoming.

> White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 93, pl. 30, fig. 10a; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 462, pl. 6, fig. 12.

- Pachymelania ? macilenta White.

2138. Goniobasis nebrascensis (Meek and Hayden).

2139. Holotype and paratypes.

Laramie (Cret.). Fort Clarke and mouth of Yellowstone 2160. River, North Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 565, text fig. 73, pl. 43, figs. 12a-h.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 463, pl. 26, figs. 15, 16.

See Melania nebrascensis.

8602. Goniobasis nebrascensis (Meek and Hayden). Plesiotypes. 20076. Eocene. Wales, Sanpete County, Utah.

> White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 213, pl. 21, figs. 9a-9c; Bull. No. 34, U. S. Geol. Surv., 1886, p. 28, pl. 2, figs. 4, 5.

2184. Goniobasis? omitta (Meek and Hayden). Holotype. Laramie (Cret.). Mouth of Judith River, Montana.

> Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 568, pl. 42, figs. 4a-4c.-White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 463, pl. 26, fig. 10.

See Melania omitta.

28947. Goniobasis? pealei Stanton.

Cotypes.

Dakota? (Cret.). Three Forks Valley, Montana, and Yellowstone National Park.

Stanton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 632, pl. 75, fig. 6.

691. Goniobasis simpsoni (Meek). Cotype. Hams Fork, northeast of Fort Bridger, Wyo-Eocene.

ming.

Meek, Rept. Expl. Great Basin of Utah, Simpson, 1876, p. 365, pl. 5, fig. 1e.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 464, pl. 31, fig. 2.

2145. Goniobasis sublævis (Meek and Hayden). Holotype and paratype.

Laramie (Cret.). Mouth of Judith River, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 567, pl. 4 figs. 5a, 5b.—White, Third Ann. Rept. U. S. Geol. Surv 1883, p. 463, pl. 26, fig. 18.

See Melania sublævis.

19180. Goniobanin? nubtortuosa (Meek and Hayden). Hokeyje and paratyjes

Laramie (Cret.). Mouth of Judith River, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 569, text figs. 75, 76, pl. 42, figs. 17a, 17b.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 463, pl. 27, fig. 34.

Sec Melania subtortuosa.

Hong. Coniobasis tenera Hall.

Plesiotypes.

Eccene. Head of Soldiers Fork, Utah.

White, Rept. U.S. Geogr. Surv. W. 100th Merid., IV, Pt. I. 1870 p. 212, pl. 21, figs. 11a-11c.

8887. Goniobasis tenera Hall.

Plesiotyne

Bocene. Wyoming, Colorado, and Utah.

White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 464, pl. 51 figs. 1-30.

[The above includes G. simpsoni Meck, G. nodulifera Meck, G. carteri Conrad, G. columinis White, and G. arcta Meck T. V. Stanton.]

2141. Goniobasis tenuicarinata (Meek and Hayden). Holotype Laramie (Cret.). Near Fort Union, North Dakota

> Meck, Rept. U.S. Geol, Surv. Terr., IX, 1876, p. 566, pl. 43 fig. 14a 14c. White, Third Ann. Rept. U.S. Geol. Surv., 1883 1 463, pl. 26, fig. 11; Bull. No. 34, U.S. Geol. Surv., 1886, p. 2c. pl. 2, fig. 6

See Melania tennicarinata.

8507. Goniobasis tenuicarinata Meek and Hayden (. Plesiotym-Eocene, Wales, Utah.

White, Bull. No. 34, 1. S. Geol. Surv., 1886, p. 28. pl. 2, ng., 50.

40527 Gonioceras occidentale Hall

Plesicities

Clarke, Gool and Nat. Hist. Surv. Minn., Final Rept., II., 4: I. (80) p. 58; pl. 57; fig. b.

43). Goniomya americana Meek and Hayden. Hoiotye

Stones River Ord . Dixon, Illinois.

Fox Hills Cret Morean River South Takot.

Meck and History Proc. Acad. Nat. Sci. Phila. VIII. 1887(1) 5 - Mock. Rept. 1. S. Geol. Surv. Terri. IX. 1876(1) 22 (1) 188 (20) 24 (21)

12307 Goniomya horealis Merck

Holow.

Nanamie Cret Nanamie Vancouve: Island

Mock, Bull. 1. S. (seo), and (seogn Surv. Terr., 12. N. ... + n. pr. p. 2, fig. 2.

See Pholadomya Gomonya, horealts.

7814. Goniomya montanaensis Victic

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White we in the left of the series with Terry process. The left is the first the factors of the

13890. Goniophora perangulata (Hall). Plesiotype.
Middle Devonian. Lone Mountain, near Eureka, Nevada.
Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 171, pl. 15, fig. 10.

12234. Goniopygus zitteli Clark. Cotypes. Fredericksburg (Lower Cret.). Texas.

Clark, Johns Hopkins Univ. Circ. No. 87, 1891, 76; Bull. No. 97, U. S. Geol. Surv., 1893, p. 53, pl. 18, figs. 2a-2d; pl. 19, figs. 1a-1e.

43475. Goniotrypa bilateralis Ulrich. Cotypes and figured sections. Richmond (Ord.). Stony Mountain, Manitoba.

Ulrich, Geol. Surv. Canada, Contr. Micro-Pal., Cambro-Sil., Pt. II, 1889, p. 41, text figs. 1-3, pl. 9, fig. 1.

I 3403. Gonostoma yatesii Cooper. Plesiotypes.

John Day (Miocene). Eastern Oregon.

White, Bull. No. 18, U. S. Geol. Surv., 1885, p. 16, pl. 3, figs. 8-12.

37969. **Græophonus carbonarius** Scudder. Holotype. Upper Coal Measures. Mazon Creek, Grundy County, Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, p. 454, pl. 40, fig. 3; Foss. Insects N. America, 1890, p. 430, pl. 32, fig. 3.

201. Grammatodon inornatus (Meek and Hayden). Cotypes.
Jurassic. Southwest base of Black Hills, South Dakota.

Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Knowl.,
No. 172, XIV, 1864, p. 90, pl. 3, figs. 9, a, b.

See Arca (Cucullæa) inornata.

12398. **Grammatodon? vancouverensis** (Meek). Holotype. Nanaimo (Cret.). Komooks, Vancouver Island.

Meek, Bull. U. S. Geol. and Geogr. Surv. Terr., II, 1876, p. 356, pl. 3, figs. 5, a.

= Nemodon vancouverensis.

See Arca vancouverensis.

14385. Grammysia arcuata (Conrad). Plesiotype. Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 245, pl. 20, fig. 5.

14384. **Grammysia hannibalensis** (Shumard). Plesiotype. Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 244, pl. 20, fig. 4.

13895. Grammysia minor Walcott. Coty
Upper Devonian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 174, pl. 15, 1

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 174, pl. 15, 15, 15a.

- Middle Devonian. Ereré, Para, Brazil.

  Plesiotype.
  - Hartt and Rathbun, Ann. Lyceum Nat. Hist. New York, XI, 1875, p. 130.
  - = Pholadella parallela.
- Rank. Granatocrinites cidariformis Troost. Chirotypes.

  Mississippian. Bedford County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 62. [Referred by Hambach to Cidaroblastus granularis Roemer.]

854: Granatocrinus lotoblastus White. Holotype. Lower Carboniferons. Ewells Spring. Arizona.

White, Fredim, Rept. U. S. Geogri, Surv. W. 198th Merid., 1972. p. 13. Rept. U. S. Geogri, Surv. W. 198th Merid., IV, Pt. L. 1987, p. N. pl. 5, figs. pt. 5.

Sens. Granutocrinus lotoblastus White? Plesiotype.
Lower Carboniferous. Teton Range, just west of IdahoWyoming boundary.

Whole, Bull. No. 5, U.S. Geol. Surv. Term. 1979, pl. 212.

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Truch, Journ. Communic Sec. Nat. Else. V. 1982, p. 1986, pl. 7, figs. 5, 5a.

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114609. **Grateloupia (Cytheriopsis) alumensis** Dall. Holotype. Chipola (Oligocene). Alum Bluff, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1239, pl. 52, fig. 14.

1843. Gratelupia? mactropsis Conrad.

Holotype.

Miocene. Isthmus of Darien.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, V, 1856, p. 328, pl. 6, fig. 54.

14437. **Griffithides portlocki** (Meek and Worthen). Plesiotype. Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 266, pl. 24, figs. 4-4b.

115525. Gryphæa athyroides Guppy. Holotype.

Eocene. San Fernando, Trinidad, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 583, pl. 16, fig. 17.

=Ostrea athyroides.

318. Gryphæa calceola nebrascensis Meek and Hayden.

1881. Cotypes.

Jurassic. Head of Wind River Valley, Wyoming.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila. for 1861, p. 437; Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 74, pl. 3, figs. 1a-f.—Jackson, Mem. Bost. Soc. Nat. Hist., IV, No. 8, 1890, p. 317, pl. 24, figs. 23, 24.

12540. Gryphæa calceola nebrascensis Meek and Hayden.

Plesiotypes.

Jurassic. Sheep Creek, Uinta Range, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 286, pl. 7, fig. 11.

28952. Gryphæa calceola nebrascensis Meek and Hayden.

Plesiotypes.

Jurassic. Yellowstone National Park.

Stanton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 612, pl. 72, figs. 5-7.

28769 Gryphæa corrugata Say. Plesiotypes.

to Washita (Lower Cret.). Texas, Indian Territory, and 28773. Kansas.

Hill and Vaughan, Bull. No. 151, U. S. Geol. Surv., 1898, p. 53, pl. 5, fig. 8; pl. 6, figs. 1-6, 8, 9; pl. 7, figs. 1-3; pl. 8, figs. 1-17; pl. 12, figs. 1, 2; pl. 18, figs. 1-3; pl. 19, fig. 2.

See Gryphæa pitcheri.

28953.

28774. Gryphæa corrugata belviderensis Hill and Vaughan.

Cotype

Washita (Lower Cret.). Black Hills, Kansas.

Hill and Vaughan, Bull. No. 151, U. S. Geol. Surv., 1898, p. 5, pl. 9, figs. 1-3; pl. 10, figs. 1, 2; pl. 11, figs. 1, 2.

22233. Gryphæa corrugata tucumcarii (Marcou). Plesiotypes. Washita (Lower Cret.). Texas, and Mesa Tucumcari, New Mexico.

Hill and Vaughan, Bull. No. 151, U. S. Geol. Surv., 1898, p. 56, pl. 13, figs. 4, 5; pl. 14, figs. 1, 2.

28776. Gryphæa marcoui Hill and Vaughan. Cotypes. to Fredericksburg (Lower Cret.). Near Austin and Edwards 28778. Plateau, Texas.

Hill and Vaughan, Bull. No. 151, U. S. Geol. Surv., 1898, p. 50, pl. 2, figs. 1-15, 17-21; pl. 3, figs. 1-10; pl. 4, figs. 1-4; pl. 5, figs. 1-7.

30226. **Gryphæa mucronata** Gabb. Plesiotypes. Buda (Lower Cret.). Near Austin, Texas.

Shattuck, Bull. No. 205, U. S. Geol. Surv., 1903, p. 21, pl. 9, figs. 1-4.

28779. **Gryphæa mucronata** Gabb. Plesiotypes.

Del Rio (Lower Cret.). Near Linders Spring, Travis
County, Texas.

Hill and Vaughan, Bull. No. 151, U. S. Geol. Surv., 1898, p. 63, pl. 23, figs. 4-14; pl. 24, figs. 1-16; pl. 25, figs. 1-8; pl. 26, figs. 4, 5; pl. 27, figs. 1-5; pl. 28, figs. 1-5; pl. 29, figs. 1-6; pl. 30, figs. 1-5.

28780. **Gryphæa navia** (Hall). Plesiotypes. 28781. Washita (Lower Cret.). Near Denison, Texas, and Black Hills, Kansas.

Hill and Vaughan, Bull. No. 151, U. S. Geol. Surv., 1898, p. 57, pl. 13, figs. 1-3; pl. 18, figs. 4-12.

See Exogyra forniculata.

8775. **Gryphæa newberry**i Stanton. Cotypes. Colorado (Crct.). Southern Utah.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 60, pl. 5, figs. 1-5.

See Gryphæa pitcheri var.

9880. Gryphæa pitcheri Morton. Plesiotypes. Cretaceous. Leon Springs, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 155, pl. 7, figs. 3a-d; pl. 21, figs. 3a-3c.

=Gryphæa corrugata.

9733. Gryphæa pitcheri Morton. Cretaceous. Texas.

Plesiotypes.

White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 302, pl. 49, figs. 1-3.

8653. Gryphæa pitcheri Morton var. Plesiotypes.
Colorado (Cret.). Southern Utah and Northern New
Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 171, pl. 17, figs. 1a-f.

=Gryphæa newberryi.

12369. **Gryphæa planoconvexa** Whitfield. Plesiotypes. 28031. Jurassic. Yellowstone National Park.

Stanton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 611, pl. 72, figs. 9, 10.

328. Gryphæa vesicularis Lamarck? Plesiotypes.
Fort Pierre (Cret.). Cheyenne River, near Black Hills,
South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 20, pl. 11, figs. 2a-c; pl. 16, figs. 8a, 8b.

2340. Gryphæa vesicularis Lamarck. Plesiotypes.
Cretaceous. Near Freehold, New Jersey.

White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 303, pl. 48, figs. 1-5.

28775. Gryphæa wardi Hill and Vaughan. Cotypes.
Glen Rose (Lower Cret.). Between Bee Creek and Pedernalis River, Travis County, Texas.

Hill and Vaughan, Bull. No. 151, U. S. Geol. Surv., 1898, p. 49, pl. 1, figs. 1-16.

28782 Gryphæa washitaensis Hill. Plesiotypes. to Washita (Lower Cret.). Near Denison and Austin, 28785. Texas.

Hill and Vaughan, Bull. No. 151, U. S. Geol. Surv., 1898, p. 59, pl. 19, figs. 3-5, 7-9, 11-18; pl. 20, figs. 1, 2, 4; pl. 23, figs. 1-3.

12512. **Gymnotoceras blakei** (Gabb.). Plesiotypes. Triassic. Cottonwood Canyon, West Humboldt Range, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 113, pl. 10, figs. 10a, b; pl. 11, fig. 6a.

12526. **Gymnotoceras rotelliforme** Meek. Cotypes. Triassic. Buena Vista Canyon, West Humboldt Range, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 111, pl. 10, figs. 9, 9a.

Gypidula comis (Owen). See Pentamerus (n. s.?) Owen.

5896. Gyroceras logani Meek. Holotype.

Base of Devonian. Forty miles below Fort Good Hope,
Mackenzie River, Canada.

Meek, Trans. Chicago Acad. Sci., I, 1868, p. 110, pl. 15, figs. 2a-c.

12459. **Gyrodes conradi** Meek. Holotype and plesiotype. 22910. Fort Beuton? or Colorado (Cret.). Cheyenne River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 310, text figs. 33-36.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 136, pl. 29, figs. 7, 8.

7856. Gyrodes depressa Meek. Cotypes.

Colorado (Cret.). Chalk Creek, above Coalville, Utah.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 159, pl. 15, fig. 1a.

22912. Gyrodes depressa Meek.

Plesiotypes.

Colorado (Cret.). Huerfano Park, Colorado.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 135, pl. 29, figs. 11-14.

20126. Gyrodes dowelli White.

Holotype.

Chico (Cret.). Jacksonville, Oregon.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 19, pl. 3, figs. 8, 9.

114430. **Gyrodes (Gyrodisca) duplinensis** Dall. Holotype. Miocene. Magnolia, Duplin County, North Carolina.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 45.

= Macromphalia (Gyrodisca) duplinensis.

See Gyrodisca duplinensis.

114430. Gyrodisca duplinensis (Dall). Holotype.

Miocene. Magnolia, Duplin County, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 922, pl. 27, fig. 27.

= Macromphalia (Gyrodisca) duplinensis.

See Gyrodes (Gyrodisca) duplinensis.

45823. Gyronema duplicatum Ulrich and Scofield. Cotype.

Stones River (Ord.). Dixon, Illinois.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1055, pl. 78, fig. 22.

45824. Gyronema liratum Ulrich and Scofield. Holotype.

Stones River (Ord.). Beloit, Wisconsin.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1056, pl. 78, figs. 14-16.

45825. Gyronema pulchellum Ulrich and Scofield. Cotypes.
Black River (Ord.). Chatfield, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1054, pl. 78, figs. 19–21.

45826. Gyronema semicarinatum (Salter). Plesiotypes.

Black River (Ord.). Near Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1055, pl. 78, figs. 17, 18.

9316. Hadrophyllum glans White. Plesiotype.

Upper Burlington (Miss.). Burlington, Iowa-

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 156, pl. 39, figs. 5a, 5b.

35224. Haguia sphærica Walcott. Cotypes.

Flathead (Cambrian). Soda Butte Creek, Yellowstone
National Park.

Walcott, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 442, pl. 63, figs. 6, 6a.

158303. Haimesiastræa conferta Vaughan. Holotype and paratypes. 158304. Chickasawan (Eocene). Bells Landing, Wilcox County, 158311. and Woods Bluff, Alabama.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 145, pl. 15, figs. 6-9; pl. 16.

35060. Hallicystis imago (Hall). Plesiotype.
Niagaran (Sil.). Chicago, Illinois.

Schuchert, Smithsonian Misc. Coll. Quart., XLVII, 1904, p. 216, text fig. 24.

41361. Halliella labiosa Ulrich. Cotypes.
Trenton (Ord.). Cannon Falls, Minnesota.
Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 656, pl. 46, figs. 43-46.

41363. Halliella retifera Ulrich.

Cotypes.

Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 185, pl. 15, figs. 5a-e.

12518. Halobia (Daonella) lommeli (Wissman). Plesiotypes.
Triassic. Desatoya Mountains, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 100.

280. Haminea minor (Meek and Hayden). Plesiotype. Fox Hills (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 273, pl. 31, figs. 1a, 1b.

See Bulla minor.

278. Haminea occidentalis (Meek and Hayden). Holotype and paratypes.
Montana (Cret.). Yellowstone River, near Miles City,

Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 271, pl. 18, figs. 11a, 11b, 12a, 12b.

See Bulla occidentalis.

113895 Haminea pompholyx Dall. Cotypes. to Chipola (Oligocene). Calhoun County, Florida.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 32; Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 59, fig. 16.

279. Haminea subcylindrica (Meek and Hayden). Holotype. Fort Pierre (Cret.). Near mouth of Milk River, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 272, pl. 18, figs. 10a, 10b.

See Bulla subcylindrica.

12255. Haminea subcylindrica (Meek and Hayden). Plesiotypes.
Fort Pierre (Cret.). Old Woman Fork of Cheyenne River,
Wyoming.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 437, pl. 12, fig. 24.

22932. Haminea truncata Stanton. Cotypes. Colorado (Cret.). Poison Canyon, Huerfano Park, Colorado.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 162, pl. 34, figs. 9-11.

21730. Hamites elatior Forbes?

Plesiotypes.

Lower Cretaceous. Islands of St. Paul and St. Peter, Straits of Magellan, South America.

White, Proc. U. S. Nat. Mus., XIII, 1890, p. 13, pl. 2, figs. 1, 2.

9869. Hamites larvatus Conrad. Plesiotype.
Washita (Lower Cret.). Leon Springs, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 165, pl. 21, fig. 8.

39941. **Haplocrinites hemisphæricus** Troost. Chirotype. Silurian. Decatur County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 61.

38097. Haplophlebium longipennis Scudder. Cotypes. Upper Coal Measures. Near Pittston, Pennsylvania. Scudder, Proc. Amer. Acad. Arts and Sci., XX, 1885, p. 172.

41889. Harpina minnesotensis Clarke. Holotype. Trenton (Ord.). Hader, Minnesota.

Clarke, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 755, fig. 76.

41887. Harpina ottawensis (Billings)? Plastotype.
Trenton (Ord.). Big Springs, near Fountain, Minnesota.
Clarke, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 757, fig. 79.

41888. Harpina rutrellum Clarke. Holotype. Trenton (Ord.). Cannon Falls, Minnesota.

Clarke, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 758, figs. 80, 81.

35402. Hebertella borealis (Billings). Plesiotypes.
Trenton (Ord.). Frankfort, Kentucky.

Hayes and Ulrich, U. S. Geol. Surv., Folio 95, 1903, illustration sheet, figs. 36, 37.

35398. Hebertella sinuata (Hall). Plesiotype. Lorraine (Ord.). Cincinnati, Ohio.

Hayes and Ulrich, U. S. Geol. Surv., Folio 95, 1903, illustration sheet, fig. 17.

97492. Heilprinia burnsii (Dall). Holotype.

Miocene. Petersburg, Virginia.

Grabau, Smithsonian Misc. Coll., XLIV, 1904, p. 92. See Fusus (Fusus) burnsii.

Pliocene. Shell Creek, De Soto County, Florida.

Grabau, Smithsonian Misc. Coll., XLIV, 1904, p. 87.

See Fusus caloosaënsis.

- Heilprinia caloosaënsis carolinensis (Dall). Holotype.
  Pliocene. Tillys Lake, Waccamaw River, South Carolina.
  Grabau, Smithsonian Misc. Coll., XLIV, 1904, p. 89.
  See Fusus caloosaënsis carolinensis.
- 112381. Heilprinia equalis (Emmons). Plesiotype.
  Miocene. Natural Well, Duplin County, North Carolina.
  Grabau, Smithsonian Misc. Coll., XLIV, 1904, p. 89.
  See Fusus (Fusus) equalis.
  - 247. Helcion alveolus Meek and Hayden. Holotype.

    Montana (Cret.). Yellowstone River, Montana.

    Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 68.

    = Anisomyon alveolus.
  - 248. Helcion carinatus Meek and Hayden. Holotype.
    Fort Pierre (Cret.). Great Bend of Missouri, below Fort
    Pierre, South Dakota.

    Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 68.
- 23064. Helcion granulatus Stanton. Holotype and paratype. Knoxville (Lower Cret.). Near Stephenson, Tehama County, California.

=Anisomyon borealis.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 63, pl. 12, fig. 4.

246. Helcion patelliformis Meek and Hayden. Holotype and paratypes.

Montana (Cret.). Yellowstone River, near Miles City
Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 66 = Anisomyon patelliformis.

249. Helcion sexsulcatus Meek and Hayden. Holotyp Montana (Cret. · Yellowstone River, near Miles Cit Montana.

> Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. ( = Anisomyon sexsulcatus.

244. Helcion subovatus Meek and Hayden. Holotyp Montana Cret. Yellowstone River, Montana.

> Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. ( = Anisomyon subovatus,

45827. Helcionopsis striata Ulrich. Holotyr Richmond Ord.: Marion County, Kentucky. Ulrich, Geol. and Nat. Hist, Surv. Minn., Final Rept., III, Pt. 1897, p. 827, pl. 61, figs. 29, 30.

45828. Helcionopsis subcarinata Ulrich and Scofield. Cotype Trenton Ord. Goodhue County, Minnesota.

> Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Fir Rept., III, Pt. II, 1897, p. 827, pl. 61, fig. 28.

18324. Helenia bella Walcott. Cotyj Lower Cambrian. Conception Bay, Newfoundland.

> Walcott, Proc. U. S. Nat. Mus., XII, 1889, p. 39: Tenth Ann. Re U. S. Geol. Surv., 1890, p. 616, pl. 78, figs. 4-4b.

111939. Helicina ballista Dall. Cotyp 111941. Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I. 1890, p pl. 1, figs. 2, 2a.

111943. Helicina ballista tampæ Dall. Cotyp Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p.

474. Helicoceras angulatum Meek and Hayden. Holoty Fort Pierre Cret. Head of south branch of Cheyen River, South Dakota.

> Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1860, p. 1 = Heteroceras? angulatum.

22934. Helicoceras? corrugatum Stanton. Holoty-Colorado Cret. J. Turkey Creek, Huerfano Park, Colorad Stanton, Bull. No. 166, U. S. Geol. Surv., 1893, p. 165, pl. 35, fig

473. Helicoceras mortoni tenuicostatum Meek. Cotyp Fort Pierre Cret. Great Bend of the Missouri, bel Fort Pierre, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 487, pl. 22, f 32-c.

See Helicoceras tenuicostatus.

8638. Helicoceras pariense White. Cotypes and plesiotypes. 22933. Colorado (Cret.). Southeast of Paria, and Upper Kanab, Utah.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 203, pl. 19, figs. 2a-d.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 164, pl. 35, figs. 2-4.

12307. Helicoceras stevensoni Whitfield. Holotype.
Fort Pierre (Cret.). West side Beaver Creek, Black Hills,
South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 447, pl. 14, figs. 5-8.

473. Helicoceras tenuicostatus Meek and Hayden. Holotype.
Fort Pierre (Cret.). Great Bend of Missouri, below Fort
Pierre, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1858, p. 56.

= Helicoceras mortoni tenuicostatum.

471. Helicoceras? tortus Meek and Hayden. Holotype.
Fort Pierre (Cret.). Great Bend of Missouri, below Fort
Pierre, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1858, p. 54.

=Heteroceras tortum.

43417. Helicopora archimediformis Claypole. Holotype.

Chester (Miss.). Litchfield, Kentucky.

Claypole, Quart. Jour. Geol. Soc. London, XXXIX, 1883, p. 34, pl. 4, figs. 3, 4.

= Archimedes laxus.

43479. Helicopora ulrichi Claypole.

Holotype.

Onondaga (Dev.). Falls of the Ohio.

Claypole, Quart. Jour. Geol. Soc. London, XXXIX, 1883, p. 33, pl. 4, fig. 2.

46057. Helicotoma declivis Ulrich.

Cotypes.

Stones River (Ord.). Murfreesboro, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1036, pl. 74, figs. 34-38.

45829. Helicotoma granosa Ulrich. Ho

Holotype.

Stones River (Ord.). High Bridge, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1035, pl. 82, figs. 32-34.

45830. Helicotoma marginata Ulrich.

Holotype.

Richmond (Ord.). Richmond, Indiana.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I 1897, p. 1036, pl. 74, fig. 39. 45831. Helicotoma planulata Salter. Plesiotypes.
Black River (Ord.). Paquette Rapids, Ottawa River,
Canada.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1033, pl. 74, figs. 16, 17.

45832. Helicotoma planulata robusta Ulrich and Scofield.

Holotype.

Stones River (Ord.). Jo Daviess County, Illinois.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1033, pl. 74, fig. 15.

45833. Helicotoma planulatoides Ulrich. Holotype. Black River (Ord.). Mercer County, Kentucky.

Ulrich Cool and Not Hist Surv Minn Final Pant III

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1034, pl. 74, figs. 28–30.

46058. **Helicotoma subquadrata** Ulrich. Cotypes. Stones River (Ord.). Murfreesboro, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1033, pl. 74, figs. 31-33.

46059. Helicotoma tennesseensis Ulrich. Cotypes.

Stones River (Ord.). Murfreesboro, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1034, pl. 74, figs. 20-24.

45834. Helicotoma umbilicata Ulrich and Scofield. Cotypes. 45835. Stones River (Ord.). Dixon and La Salle, Illinois.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1034, pl. 62, fig. 68; pl. 74, figs. 25-27.

45836. Helicotoma verticalis Ulrich. Holotype. Stones River (Ord.). High Bridge, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1035, pl. 62, fig. 69; pl. 74, figs. 18, 19.

43668. **Heliotrypa bifolia** Ulrich. Cotypes and figured sections. Chester (Miss.). Sloans Valley, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 278, pl. 13, figs. 6-6c.

111959. **Helix** (**Dædalochila**) **adamnis** Dall. Holotype. Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 12, pl. 1, figs. 5, 5a.

20073. Helix adipis White. Cotypes.

Eocene. Nacimiento, New Mexico.

White, Bull. No. 34, U. S. Geol. Surv., 1886, p. 27, pl. 5, figs. 11, 12.

111946. Helix (Jeanneretia) crusta Dall. Cotypes.

111947. Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 9, pl. 1, figs. 4, 4a, 4b, 6e, 6f.

Oligocene. Ballast Point, Tampa, Florida. Cotypes.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 10.

13401. Helix (Monodon?) dallii (Stearns ms.) White.

Holotype and paratypes.

John Day (Miocene). Eastern Oregon.

White, Bull. No. 18, U. S. Geol. Surv., 1885, p. 14, pl. 3, figs. 4-6.

Oligocene. Ballast Point, Tampa, Florida. Cotypes.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 10, pl. 1, figs. 1, 1a.

111955. Helix (Jeanneretia) direpta Dall. Cotypes.

130354. Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 10, pl. 1, figs. 7a, 7b; Pt. V, 1900, pl. 39, figs. 4, 5.

12502. Helix evanstonensis White. Cotypes.

Laramie (Cret.). Evanston, Wyoming.

White, Bull. U. S. Geol. and Geogr. Surv. Terr., IV, 1878, p. 714; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 454, pl. 27, figs. 29-31.

13400. **Helix** (**Aglaia**) fidelis Gray. Plesiotypes. John Day (Miocene). Eastern Oregon.

White, Bull. No. 18, U. S. Geol. Surv., 1885, p. 14, pl. 3, figs. 1-3.

Oligocene. Ballast Point, Tampa, Florida.

Holotype.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 11, pl. 1, figs. 7c, 7d.

111945. Helix (Jeanneretia) instrumosa Dall. Cotypes.
Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 9, pl. 1, figs. 7, 8b.

8883. Helix kanabensis White.

Cotypes.

Laramie (Cret.). Upper Kanab, Utah.

White, Powell's Rept. Geol. Uinta Mountains, 1876, p. 120; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 454, pl. 25, figs. 12-14.

111944. Helix (Jeanneretia) latebrosa Dall. Holotype. Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 8, pl. 1, figs. 8, 8a.

210:. Helix leidyi Hall and Meek. Holotype.
White River (Miocene). Bad Lands of White River,
South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 604, pl. 45, figs. 7a, 7b.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 455, pl. 32, figs. 32, 33.

8590. Helix leidyi Hall and Meek. Plesiotype. Miocene. Mooseneck Peak and Pownsagunt Plateau, Utah. White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 211, pl. 21, figs. 3u-3c.

20072. Helix nacimientensis White. Cotypes. Eocene. Nacimiento, New Mexico.

White, Bull. No. 34, U. S. Geol. Surv., 1886, p. 26, pl. 5, figs. 3-7.

2106. Helix occidentalis Meek and Hayden. Cotypes.

Laramie (Cret.). Mouth of Judith River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1857, p. 135.

= Hyalina? occidentalis.

8882. Helix peripheria White.

Bitter Creek (Eocene). Pine Valley Mountains, Utah.

White, Powell's Rept. Geol. Uinta Mountains, 1876, p. 130;
Third Ann. Rept. U. S. Geol. Surv., 1883, p. 445, pl. 29, figs.

11, 12.

13402. Helix (Patula) perspectiva Say. Plesiotypes. John Day (Miocene). Eastern Oregon.

White, Bull. No. 18, U. S. Geol. Surv., 1885, p. 14, pl. 3, fig. 7.

8881. Helix riparia White. Cotypes.

Green River (Eocene). Eighty miles below Green River
City, Wyoming.

White, Powell's Rept. Geol. Uinta Mountains, 1876, p. 130; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 455, pl. 29, figs. 13, 14.

8908. Helix (Patula) sepulta White. Cotypes.

Laramie (Cret.). Evanston, Wyoming.

White, Proc. U. S. Nat. Mus., III, 1880, p. 160.

1974. Helix spatiosa Meek and Hayden. Holotype. Wind River (Eocene). Wind River Valley, Wyoming.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1861, p. 446.

= Macrocyclis spatiosa.

1975. Helix? veterna Meek and Hayden. Holotype and paratype. Eocene. Wind River Valley, Wyoming.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1861, p. 447.—
Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 596, pl. 42,
figs. 8a, 8b.—White, Third Ann. Rept. U. S. Geol. Surv., 1883,
p. 454, pl. 30, figs. 4, 5.

2104. Helix vetusta Meek and Hayden. Holotype and paratypes. Laramie (Cret.). Mouth of Judith River, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 552, pl. 42, figs. 7a, 7b.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 454, pl. 27, fig. 28.

See Helix vitrinoides.

2104. Helix vitrinoides Meek and Hayden. Cotypes.

Laramie (Cret.). Mouth of Judith River.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1857, p. 135. = Helix vetusta.

18359. Helminthoidichnites marinus (Emmons)? Plesiotype.
Lower Cambrian. Washington County, New York.

Walcott, Proc. U. S. Nat. Mus., XII, 1889, p. 35; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 603, pl. 62, figs. 1-4.

18359. Helminthoidichnites marinus (Emmons). Plesiotypes.

26275. Lower Cambrian. Washington County, New York.

- 26277. Walcott, Mon. XXX, U. S. Geol. Surv., 1898, pl. 27, figs. 2, 4, 5. 26279.
- 33793. Helminthoidichnites meeki Walcott. Holotype.
  Greyson (Algonkian). Deep Creek Canyon, near Glenmont, Montana.

Walcott, Bull. Geol. Soc. Amer., X, 1899, p. 236, pl. 24, fig. 7.

- 33795. Helminthoidichnites? neihartensis Walcott. Cotypes. Greyson (Algonkian). Glenwood and Neihart, Montana. Walcott, Bull. Geol. Soc. Amer., X, 1899, p. 236, pl. 24, figs. 1, 2, 4.
- 33794. Helminthoidichnites? spiralis Walcott. Cotypes.
  Greyson (Algonkian). Deep Creek Casyon, near Glenmont, Montana.

Walcott, Bull. Geol. Soc. Amer., X, 1899, p. 236, pl. 24, figs. 5, 6.

43566. Helopora alternata Ulrich.

Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XII, 1890, p. 192, fig. 16f; Geol. and Nat. Hist. Surv. Miss., Final Rept., III, Pt. 1, 1893, p. 192, pl. 3, fig. 9.

43568. Helopora divaricata Uhrich. Cotypes. Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 191, pl. 3, figs. 1-3.

43566. **Helopora elegans** Ulrich. Holotype. Richmond (Ord.). Blanchester, Ohio.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 194, fig. 11.

43369. Helopora fragilis Hall. Plesiotypes and figured sections. Clinton Sil. . Hamilton, Ontario, Canada.

Ulrich, Geol. Surv. III., VIII, 1890, p. 643, figs. 18, a-e.

43569. Helopora harrisi James. Plesiotypes. Richmond Ord. Waynesville, Ohio.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1933, p. 195, pl. 3, figs. 11, 11b, 11c, 12.

43370. Helopora lindströmi Ulrich. Cotypes and figured section. Silurian. Island of Gotland, Sweden.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 643, figs. 18, f, g, h.

43677. Helopora mucronata Ulrich. Holotype.
Trenton (Ord. Cannon Falls, Minnesota.

Ulrich, Jour. Cincinnati Soc. Nat. Hist., XII, 1890, p. 192, fig. 16c; Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 193, pl. 3, fig. 10.

43567. Helopora quadrata Ulrich. Cotypes.

Trenton Ord. Near Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I.
1893, p. 193, fig. 10.

38137. Hemeristia occidentalis Dana? Plesiotype.
Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1885, p. 342, pl. 31, fig. 8; Foss. Insects N. America, I, 1890, p. 306, pl. 17, fig. 8.

12241. Hemiaster calvini Clark. Holotype. Shoal Creek Lower Cret. Travis County, Texas.

Clark, Bull No. 97. U. S. Geol, Surv., 1893, p. 90, pl. 49, figs. 2a-i.

19114. Hemiaster dalli Clark. Holotype. Washita Lower Cret. Bexar County, Texas.

Clark, Johns Hopkins Univ. Circ. No. 87, 1891, p. 77; Bull No. 97.

331. Hemiaster humphreysanus Meek and Hayden.

Holotype and paratype. Fort Pierre Upper Cret. . One hundred and fifty miles from mouth of Yellowstone River, Montana.

Meek and Hayden, Proc. Acad. Mat. Sci. Phila., for 1857, p. 147.—
Meek, Rept. U. S. Geol. Surv. Terr., ix, 1876, p. 5, pl. 10, figs. 1a-g.—Clark. Bull. No. 97, U. S. Geol. Surv., 1803, p. 88.

figs. 1a-g.—Clark. Bull. No. 97, U. S. Geol. Surv., 1893, p. 88, pl. 48, figs. 1a-f.

U. S. Geol. Surv., 1893, p. 59, pl. 48, figs. 2a-2e.

2208. Hemiaster stella Morton . Plesiotype.
Upper Cretaceous. Timber Creek, New Jersey.
Clark. Bull. No. 97, U. S. Geol. Surv., 1893, p. 84, pl. 40, figs.

30187. Hemicidaris intumescens Clark. Cotype.

30188. Jurassic. Taylorsville, California.

Clark, Bull. No. 97, U. S. Geol. Surv., 1893, p. 44, pl. 12, figs. 1b, 1d, 1e?, 1h, 1i.

4953. Hemicrupturus rasoumowskii Green. Plastotype. Ordovician? Tzarsko Selo, Russia.

Green, Mon. Trilobites N. America, Phila., 1832, p. 20. Cast No. 42.

43564. Hemiphragma irrasum Ulrich. Cotypes and figured sections.

43565. Stones River (Ord.). Minneapolis, Minnesota. Trenton (Ord.). Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 299, pl. 24, figs. 5-19.

43563. Hemiphragma tenuimurale Ulrich. Cotypes and figured sections.

Trenton (Ord.). Near Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 301, pl. 24, figs. 20-23.

636. Hemipronites chemungensis arctostriata (Conrad).

Plesiotypes.

Upper Devonian. West side Buell Valley, east of Eureka District, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 35, pl. 3, fig. 2.

=Schuchertella arctostriata.

1010. Hemipronites crassus (Meek and Hayden). Cotypes. Coal Measures. Leavenworth, Kansas.

Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 26, pl. 1, figs. 7a, 7b.

=Orthotetes crassus.

See Orthisina crassa.

6529. Hemipronites crassus (Meek and Hayden). Cotypes.

7013. Upper Carboniferous. Nebraska City, Nebraska.

24531. Meek, Final Rept. U. S. Geol. Surv. Neb., 1872, p. 174, pl. 5, figs. 10a-c; pl. 8, fig. 1.—White, Thirteneth Ann. Rept. Geol. Surv. Ind., 1884, p. 129, pl. 26, figs. 4-11.

=Orthotetes crassus.

8475. Hemipronites crenistria (Phillips). Plesiotype.
Upper Carboniferous. Locality unknown.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 187 p. 124, pl. 10, fig. 9a.

= Orthotetes crassus ?

684. Hemipronites crenistria (Phillips). Plesiotypes.
Upper Carboniferous. Near Camp Floyd, west of Utah
Lake, Utah.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 62, pl. 7, fig. 2.

=Orthotetes robustus.

43764. Hemitrypa aspera Ulrich. Cotypes. 43765. Keokuk (Miss.). Nauvoo, Illinois, and Keokuk. Iowa.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 563, pl. 57, figs. 4c-4f.

44087. Hemitrypa nodosa Ulrich. Holotype. Keokuk (Miss.). Bentonsport, Iowa.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 562, pl. 57, fig. 3.

43374. Hemitrypa pateriformis Ulrich. Cotype. Keokuk (Miss.). Keokuk, Iowa.
Ulrich, Geol. Surv. Ill., VIII, 1890, p. 564, pl. 57, figs. 7-7c.

43766. Hemitrypa perstriata Ulrich. Cotype and figured sections. Keokuk (Miss.). Bentonsport, Iowa.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 564, pl. 57, figs. 6, 6a.

43371. Hemitrypa proutana Ulrich. Plesiotypes and figured sections.

Warsaw (Miss.). Warsaw, Illinois. Ulrich, Geol. Surv. Ill., VIII, 1890, p. 560, pl. 57, figs. 1-1c.

43372. Hemitrypa proutana nodulosa Ulrich. Cotypes. 43373. Keokuk (Miss.). Nauvoo, Illinois, and Keokuk, Iowa.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 562, pl. 57, figs. 2–2c.

45375. Hemitrypa tenera Ulrich. Cotypes and figured sections. Middle Devonian. Davenport, Iowa.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 559, pl. 44, figs. 7-7a; pl. 54, figs. 10-10c.

474. Heteroceras? angulatum Meek and Hayden). Holotype. Fort Pierre Cret. Head of south branch of Cheyenne River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 484, pl. 21, figs. 32-c.

See Helicoceras angulatum.

470. Heteroceras? cheyennense Meek and Hayden). Holotype.
Fort Pierre Cret. Mouth of Big Cheyenne River, South
Pakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 186, p. 483, pl. 21, figs. 21, 25.

See Ancyloceras? cheyenensis.

1350. Heteroceras cooperi (Gabb). Plesiotype.
Nanaimo (Cret.). Komooks, Vancouver Island.

Meek, Bull. U. S. Geol. and Geogr. Surv. Terr., II, 1876, p. 367, pl. 3, figs. 7, a.

469. Heteroceras? nebrascense (Meek and Hayden). Holotype.
Fort Pierre (Cret.). Near forks of Cheyenne River, South
Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 480, pl. 22, figs. 1a-c.

See Ancyloceras? nebrascensis.

12292. Heteroceras? nebrascense (Meek and Hayden). Plesiotype.

Montana (Cret.). East fork of Beaver Creek, Black Hills,
South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 451, pl. 14, fig. 9, pl. 15, fig. 6.

12288. Heteroceras newtoni Whitfield. Holotype. Fort Pierre (Cret.). West side of Beaver Creek, Black

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880 p. 449, pl. 15, figs. 1-4.

471. Heteroceras tortum (Meek and Hayden). Holotype. Fort Pierre (Cret.). Great Bend of the Missouri, below Fort Pierre, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 481, pl. 22, figs. 4a-c.

See Helicoceras? tortus.

Hills, South Dakota.

472. Heteroceras? umbilicatum (Meek and Hayden). Holotype.
Fort Pierre (Cret.). Great Bend of the Missouri, below
Fort Pierre, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 482, pl. 22, fig. 5. See Turrilites umbilicatus.

42219. Heterocrinus geniculatus Ulrich. Natural mould of cotype. Utica (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist. II 1879, p. 16, pl. 7, fig. 13.

=Ohiocrinus geniculatus.

42304. Heterocrinus (Iocrinus) œhanus Ulrich. Cotype. Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 175, pl. 5, fig. 9.

=Ohiocrinus œhanus.

43133. Heteronema capillare Ulrich and Bassler. Holotyp Silurian. Island of Gotland.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLV, 190 p. 278, pl. 65, fig. 11.

43134. Heteronema carbonarium Ulrich and Bassler. Holotype.

Lower Coal Measures. Seville, Illinois.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLV, p. 279, pl. 65, fig. 13.

43132. Heteronema? contextum Ulrich and Bassler. Holotype. Lorraine (Ord.). Morrow, Ohio.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLV, 1904, p. 279, pl. 65, fig. 12.

43672. Heteropora attenuata Ulrich. Cotypes and figured sections. Upper Cretaceous. Pulaski County, Arkansas.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 144, pl. 6, fig. 12.

43673. Heteropora consimilis Ulrich. Cotypes. Upper Cretaceous. Pulaski County, Arkansas.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 143, pl. 6, fig. 11.

46557. Heterospongia knotti Ulrich. Holotype.
Richmond (Ord.). Near Lebanon, Kentucky.

Ulrich, Amer. Geol., III, 1889, p. 241, fig. 5 on p. 236.

46558. Heterospongia subramosa Ulrich. Cotypes.

46559. Lorraine (Ord.). Cincinnati, Ohio.

46560. Richmond (Ord.). Near Lebanon, Kentucky, and Spring Valley, Minnesota.

Ulrich, Amer. Geol., III, 1889, p. 240, fig. 6 on p. 236.—Winchell and Schuchert, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 79, pl. G, figs. 4-6.

157831. Heteroterma gabbi Stanton. Holotype. Lower Tejon (Eocene). Near Lower Lake, California.

Stanton, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. I, 1897, p. 1046, pl. 67, fig. 3.

35113. Heterotrypa frondosa (d'Orbigny). Fragment and figured sections of Edwards and Haime's plesiotype.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 25, pl. 11, figs. 1-3.

43367. **Heterotrypa inflecta** Ulrich. Cotypes and figured sections. Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 414, pl. 37, figs. 2-2d.

**43186. Heterotrypa parvulipora** Ulrich and Bassler. Cotypes and figured sections.

Trenton (Ord.). Maury County, Tennessee.

Bander, Smithsonian Misc. Coll., Quart., XLVII, & pl. 11, figs. 4-6.

43368. Heterotrypa prolifica Ulrich. Cotypes and figured sections. Richmond (Ord.). Blanchester, Ohio.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 413, pl. 37, figs. 1-1d.

= Heterotrypa subramosa prolifica.

43750. Heterotrypa singularis Ulrich. Figured sections of cotypes. Richmond (Ord.). Wilmington, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 415, pl. 37, figs. 3c, 3d, 3e. = Dekayella singularis.

43664. Heterotrypa solitaria Ulrich. Holotype and figured sections. Lorraine (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 88, pl. 1, figs. 3-3b.

43689. Heterotrypa vaupeli Ulrich. Cotypes and figured sections. Lorraine (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 85, pl. 1, figs. 2-2b.

= Nicholsonella vaupeli.

186. Hettangia americana Meek and Hayden. Holotype and paratypes.

Fox Hills (Cret.). Mouth of Judith River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 274.

Tancredia americana.

46561. Hindia inæqualis Ulrich and Everett. Figured sections of holotype.

Stones River (Ord.). Dixon, Illinois.

Ulrich and Everett, Geol. Surv. Ill., VIII, 1890, p. 275, pl. 2, figs. 4-4b.

46562. Hindia parva Ulrich. Cotypes and figured sections. Trenton (Ord.). Fountain, Minnesota.

Ulrich, Amer. Geol., III, 1889, p. 244.—Winchell and Schuchert, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 79, pl. G, figs. 7-9.

115111. Hindsiella acuta Dall.

Holotype.

Miocene. Natural Well, Duplin County, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900,

Pall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1138, pl. 45, fig. 9.

Miocene. Natural Well, Duplin County, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900,

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1138, pl. 45, fig. 4.

155757. Hindsiella (faba var.?) donacia Dall. Holotype. Claibornian (Eocene). Claiborne, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, p. 1136, pl. 45, fig. 12.

Oligocene. Alum Bluff, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1137, pl. 45, fig. 8.

13336. Hinnites crassa Conrad. Cotypes.

Miocene. Santa Margarita, Salinas Valley, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean,
VII, 1857, p. 190, pl. 2, figs. 1, 2.

107147. **Hipponyx tort**ilis Guppy. Holotype. Oligocene. Vendryes, Jamaica, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 322, pl. 27, fig. 15.

8382. Holaster simplex Shumard. Plesiotype. Washita (Lower Cret.). Bexar County, Texas.

Clark, Bull. No. 97, U. S. Geol. Surv., 1893, p. 76, pl. 38, figs. 1a-g; pl. 39, figs. 1a-d.

35200. Holasterella wrighti americana Girty. Cotype.

Madison (Miss.). Gallatin Range, Yellowstone National
Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol, Surv., 1899, p. 508, pl. 71, fig. 11a.

12236. Holectypus planatus Roemer. Plesiotype. Washita (Lower Cret.). Cow Creek, Travis County, Texas.

Clark, Bull. No. 97, U. S. Geol. Surv., 1893, p. 58, pl. 23, figs. 2a-f.

45837. Holopea ampla Ulrich and Scofield. Cotype. Stones River (Ord.). Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1065, pl. 79, fig. 22.

45838. Holopea appressa Ulrich and Scofield. Cotype.
Trenton (Ord.). Goodhue County, Minnesota.
Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final
Rept., III, Pt. II, 1897, p. 1065, pl. 79, figs. 7-9.

28190. Holopea arctica Schuchert. Cotypes. Trenton (Ord.). Head of Frobisher Bay, Baffin Land. Schuchert, Proc. U. S. Nat. Mus., XXII, 1900, p. 168, pl. 12, figs. 14-16.

46531. Holopea concinnula Ulrich and Scofield. Plastotype. Stones River (Ord.). Beloit, Wisconsin.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1066, pl. 79, fig. 6.

45839. Holopea excelsa Ulrich and Scofield. Cotypes.
Trenton (Ord.). Wykoff, Minnesota.

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Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1067, pl. 79, figs. 11, 12. 24339. Holopea furmaniana Hartt and Rathbun. Cotypes.
Middle Devonian. Ereré, Para, Brazil.

Hartt and Rathbun, Ann. Lyceum Nat. Hist. New York, XI, 1875, p. 115.

=Diaphorostoma furmaniana.

45840. Holopea insignis Ulrich and Scofield. Cotypes.
45841. Stones River (Ord.). Minneapolis and Cannon Falls,
Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1065, pl. 79, figs. 1-5.

45842. Holopea nashvillensis Ulrich. Holotype. Trenton (Ord.). Nashville, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1068.

45843. Holopea oxfordensis Ulrich. Cotypes.
45844. Richmond (Ord.). Richmond, Indiana; Oxford, Ohio.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1068.

45845. Holopea parvula Ulrich. Holotype.
Trenton (Ord.). One mile south of Burgin, Kentucky.
Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1067, pl. 79, fig. 19.

45846. Holopea pyrene Billings. Plesiotypes.
Trenton (Ord.). Near Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final
Rept., III, Pt. II, 1897, p. 1067, pl. 79, figs. 13-18.

45847. Holopea rotunda Ulrich and Scofield. Cotypes.
45848. Stones River (Ord.). Dixon, Illinois.
Trenton (Ord.). Hartsville, Tennessee.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1066, pl. 79, figs. 20, 21.

45849. Holopea supraplana Ulrich and Scofield. Cotypes.
Trenton (Ord.). Kenyon, Minnesota.
Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final

Rept., III, Pt. II, 1897, p. 1068, pl. 79, figs. 27, 28.

23877. Homalonotus (Calymene) acanthurus Clarke. Plastotype.
Middle Devonian. Rio Maecuru, Brazil.

Clarke, Archivos do Mus. Rio de Janeiro, IX, 1890, p. 11, pl. 1,

figs. 9, 10.

23879. Homalonotus derbyi Clarke. Cotypes and plastotype.
Middle Devonian. Rio Maecuru, Brazil.
Clarke, Archivos do Mus. Rio de Janeiro, IX, 1890, p. 7, pl. 1, fig. 4

23878. Homalonotus oiara Hartt and Rathbun. Plastoty
Middle Devonian. Ereré, Brazil.

Clarke, Archivos do Mus. Rio de Janeiro, IX, 1890, p. 5, pl. 1, fig.

28942. Homomya gallatinensis Stanton. Holotype and paratypes.

Jurassic. Yellowstone National Park.

Stanton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 625, pl. 74, figs. 6, 7.

43304. Homotrypa arbuscula Ulrich. Cotypes and figured sections. 43305. Stones River (Ord.). Dixon, Illinois; High Bridge, Kentucky.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 409, pl. 33, figs. 3, 3c.

41762. Homotrypa austini Bassler. Cotypes and figured sections. Richmond (Ord.). Dutch Creek, four and one-half miles west of Wilmington, Ohio.

Bassler, Proc. U. S. Nat. Mus., XXVI, 1903, p. 584, pl. 24, figs. 5-9.

43578. Homotrypa callosa Ulrich. Cotypes and figured sections.
43579. Trenton (Ord.). Near Burgin, Kentucky, and Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 243, pl. 20, figs. 15-21.

41744. Homotrypa cincinnatiensis Bassler. Cotypes and figured sections.

Lorraine (Ord.). Cincinnati, Ohio.

Bassler, Proc. U. S. Nat. Mus., XXVI, 1903, p. 576, pl. 21, figs. 4-10.

41755. **Homotrypa communis** Bassler. Cotypes and figured sections.

Richmond (Ord.). Oregonia, Ohio.

Bassler, Proc. U. S. Nat. Mus., XXVI, 1903, p. 581, pl. 23, figs. 1-4.

41729. Homotrypa curvata Ulrich. Cotypes and figured sections. Lorraine (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 242, pl. 10, figs. 7, 7d.

41735. Homotrypa curvata præcipta Bassler. Holotype. Utica (Ord.). West Covington, Kentucky.

Bassler, Proc. U. S. Nat. Mus., XXVI, 1903, p. 575, pl. 23, fig. 15.

41758. Homotrypa cylindrica Bassler. Cotypes and figured sections.

Richmond (Ord.). Richmond, Indiana.

Bassler, Proc. U. S. Nat. Mus., XXVI, 1903, p. 585, pl. 22, figs. 8-13.

41749. Homotrypa dawsoni (Nicholson). Plesiotypes and figured sections.

Richmond (Ord.). Waynesville, Ohio.

Bassler, Proc. U. S. Nat. Mus., XXVI. 1903, p. 581, pl. 25, figs. 9-10.

41741. Homotrypa dumosa Bassler. Cotypes and figured sections. Lorraine (Ord.). Covington, Kentucky.

Bassler, Proc. U. S. Nat. Mus., XXVI, 1903, p. 576, pl. 20, fig. 1; pl. 21, figs. 1-3.

43574. Homotrypa exilis Ulrich. Cotypes and figured sections. Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 236, pl. 19, figs. 10–16.

43767. Homotrypa flabellaris Ulrich. Figured sections of cotype. Richmond (Ord.). Wilmington, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 411, pl. 32, figs. 3b, 3c.

41778. Homotrypa flabellaris spinifera Bassler. Holotype and figured sections.

Lorraine (Ord.). Covington, Kentucky.

Bassler, Proc. U. S. Nat. Mus., XXVI, 1903, p. 580, pl. 21, figs. 11-15.

43768. Homotrypa gelasinosa Ulrich. Figured sections of holotype. Richmond (Ord.). Wilmington, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 410, pl. 32, figs. 2b, 2c.

41764. Homotrypa grandis Bassler. Cotypes and figured sections.

Lorraine (Ord.). Two miles west of Goodlettsville, Tennessee.

Bassler, Proc. U. S. Nat. Mus., XXVI, 1903, p. 578, pl. 20, figs. 7-10.

43998. Homotrypa insignis Ulrich.

Cotype.

Trenton (Ord.). St. Paul, Minnesota.

Ulrich, Fourteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn., 1886, p. 82.

= Homotrypa subramosa insignis.

43577. Homotrypa (?) intercalaris Ulrich. Cotypes and figured sections.

Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 238, fig. 13.

34329. Homotrypa libana Bassler. Holotype and figured sections. Lorraine (Ord.). Lebanon, Ohio.

Bassler, Proc. U. S. Nat. Mus., XXVI, 1903, p. 578, pl. 22, figs. 1-3.

43571. Homotrypa minnesotensis Ulrich. Cotypes and figured 43572. Cotypes and cotypes are cotypes and cotypes and cotypes are cotypes and cotypes and cotypes are cotypes are cotypes and cotypes are cotypes are

Stones River (Ord.). Minneapolis, Minnesota. Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. 1893, p. 235, pl. 19, figs. 1-9.

43573. Homotrypa minnesotensis montifera Ulrich. Holotype and figured sections.

Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I,

1893, p. 235, pl. 19, fig. 3a.

34328. Homotrypa nicklesi Bassler. Cotypes and figured sections. Richmond (Ord.). Raywick, Kentucky.

Bassler, Proc. U. S. Nat. Mus., XXVI, 1903, p. 586, pl. 22, figs. 4-7.

41771. Homotrypa nitida Bassler. Cotypes and figured sections. Richmond (Ord.). Near Osgood, Indiana.

Bassler, Proc. U. S. Nat. Mus., XXVI, 1903, p. 586, pl. 20, fig. 15; pl. 25, figs. 5-8.

41753. Homotrypa nodulosa Bassler. Cotypes and figured sections. Richmond (Ord.). Hanover, Ohio.

Bassler, Proc. U. S. Nat. Mus., XXVI, 1903, p. 582, pl. 23, figs. 5-11; pl. 25, fig. 15.

43671. Homotrypa obliqua Ulrich. Holotype and figured sections.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 243, pl. 10, figs. 6, 6b.

- 41736. Homotrypa obliqua Ulrich. Plesiotypes and figured sections.
- 41737. Lorraine (Ord.) Cincinnati, Ohio.

Bassler, Proc. U. S. Nat. Mus., XXVI, 1903, p. 575, pl. 23, figs. 12-14.

41747. Homotrypa pulchra Bassler. Cotypes and figured sections. Lorraine (Ord.). Cincinnati, Ohio.

Bassler, Proc. U. S. Nat. Mus., XXVI, 1903, p. 577, pl. 20, figs. 11-14.

41760. Homotrypa ramulosa Bassler. Cotypes and figured sections. Richmond (Ord.). Versailles, Indiana.

Bassler, Proc. U. S. Nat. Mus., XXVI, 1903, p. 585, pl. 25, figs. 1-4.

41784. Homotrypa richmondensis Bassler. Cotypes and figured sections.

Richmond (Ord.). Richmond, Indiana.

Bassler, Proc. U. S. Nat. Mus., XXVI, 1903, p. 582, pl. 24, figs. 1-4.

43576. Homotrypa separata Ulrich. Holotype and figured sections. Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 237, pl. 19, figs. 17-20.

43575. Homotrypa (?) similis Foord. Plesiotypes and figured sections.

Trenton (Ord.). Near Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 242, pl. 20, figs. 28-33.

41761. Homotrypa splendens Bassler. Cotypes and figured sections. Richmond (Ord.). Wilmington, Illinois.

Bassler, Proc. U. S. Nat. Mus., XXVI, 1903, p. 587, pl. 25, figs. 11-14.

43570. Homotrypa subramosa Ulrich. Cotypes and figured sections.

Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 239, pl. 19, figs. 21-28.

43580. Homotrypa tuberculata Ulrich. Cotypes and figured sections.

Black River (Ord.). Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 240, text fig. 14.

41766. Homotrypa wortheni (James). Plesiotypes and figured sections.

Richmond (Ord.). Richmond, Indiana.

Bassler, Proc. U. S. Nat. Mus., XXVI, 1903, p. 583, pl. 24, figs. 10-14.

41768. Homotrypa wortheni intercellata Bassler. Cotypes and figured sections.

Richmond (Ord.). One-fourth mile east of Osgood, Indiana.

Bassler, Proc. U. S. Nat. Mus., XXVI, 1903, p. 584, pl. 24, fig. 17.

41767. Homotrypa wortheni prominens Bassler. Cotypes.
Richmond (Ord.). Elkhorn Creek, near Richmond,
Indiana.

Bassler, Proc. U. S. Nat. Mus., XXVI, 1903, p. 584, pl. 24, figs. 15-16.

43763. Homotrypella contexta Ulrich. Fragment and figured sections of holotype.

Richmond (Ord.). Wilmington, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 412, pl. 32, figs. 5a, 5b.

43561. Homotrypella instabilis Ulrich. Cotypes and figured sections.

Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., II I, 1893, p. 229, pl. 18, figs. 9-20. 43559. Homotrypella multiporata Ulrich. Figured sections of holotype.

Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol, and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 230, pl. 18, figs. 21, 22.

43560. Homotrypella mundula Ulrich. Holotype and figured sections.

Trenton (Ord.). Decorah, Iowa.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 232, fig. 12.

43178. Homotrypella nodosa Ulrich and Bassler. Cotypes and figured sections.

Lorraine (Ord.). Mount Parnassus, Columbia, Tennessee.

Ulrich and Bassler in Hayes and Ulrich, U. S. Geol. Surv., Folio 95, 1903, illustration sheet, figs. 14, 15.—Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 21, pl. 7, figs. 1-3.

43562. Homotrypella (?) ovata Ulrich. Cotypes and figured sections.

Trenton (Ord.). Two miles south of Cannon Falls, Minnesota

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1898, p. 231, pl. 18, figs. 23-30.

43557. **Homotrypella rustica** Ulrich. Figured sections of holotype. Richmond (Ord.). Spring Valley, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 234, pl. 18, figs. 31-33.

43558. **Homotrypella** (?) subgracilis Ulrich. Cotypes and figured sections.

Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 230, pl. 26, figs. 10-16.

23093. Hoplites angulatus Stanton. Holotype.

Knoxville (Lower Cret.). Five miles north of Paskenta,
California.

Stanton, Bull. No. 138, U. S. Geol. Surv., 1895 (Feb., 1896), p. 80, pl. 18, figs. 3, 4.

23094. Hoplites crassiplicatus Stanton. Holotype.
Knoxville (Lower Cret.). Three miles north of Paskenta,
California.

Stanton, Bull. No. 138, U. S. Geol. Surv., 1895 (Feb., 1896), p. 81, pl. 18, fig. 8.

21573. Hoplites dilleri Stanton. Holotype.

Knoxville (Lower Cret.). Three miles west of Lowerys,

Tehama County, California.

Stanton, Bull. No. 133, U. S. Geol, Surv., 1895 (Feb., 1896), p. 82, pl. 18, figs. 6, 7.

23091. Hoplites hyatti Stanton. Holotype. Knoxville (Lower Cret.). West of Riddles, Oregon.

> Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 79, pl. 16, fig. 2.

23092. Hoplites storrsi Stanton. Holotype. Knoxville (Lower Cret.). On south fork of Elder Creek, Tehama County, California.

> Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 79, pl. 17, figs. 1, 2; pl. 18, fig. 5.

45850. Hormotoma bellicincta (Hall). Plesiotypes. Trenton (Ord.). Near Cannon Falls, Minnesota.

> Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1017, pl. 70, figs. 15-17.

45851. Hormotoma gracilis (Hall). Plesiotypes. Richmond (Ord.). Near Spring Valley, Minnesota.

> Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1014, pl. 70, figs. 20-22.

45852. Hormotoma gracilis angustata (Hall). Plesiotypes. Utica (Ord.). Newport, Kentucky. to

45856. Black River (Ord.). Near Cannon Falls, Minnesota; Central Tennessee.

> Stones River (Ord.). High Bridge, Kentucky; Beloit, Wisconsin.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1014, pl. 70, figs. 30-36.

45857. Hormotoma gracilis goodhuensis Ulrich and Scofield. Cotypes.

Black River (Ord.). Near Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1015, pl. 70, figs. 42, 43.

45858. Hormotoma gracilis multivolvis Ulrich and Scofield.

Cotypes.

Richmond (Ord.). Spring Valley, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1014, pl. 70, figs. 26-29.

45859. Hormotoma gracilis sublaxa Ulrich and Scofield. Trenton (Ord.). Lincoln County, Missouri.

> Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1014, pl. 70, figs. 23-25.

45860. Hormotoma? major (Hall). Plastotype. Trenton (Ord.). Pike County, Missouri.

> Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III. Pt. II, 1897, p. 1018, pl. 71, fig. 5.

45861. Hormotoma salteri Ulrich. Cotyp Trenton (Ord.). Two miles north of Danville, Kentucl

Ulrich Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. L. 1897, p. 1016, pl. 70, figs. 44-48.

45862. Hormotoma salteri nitida Ulrich. Holotype. Trenton (Ord.). Two miles north of Danville, Kentucky. Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897. p. 1016.

45863. Hormotoma salteri tennesseensis Ulrich. Cotypes. Black River (Ord.). Near Lebanon, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1016, pl. 70, figs. 49-51.

45864 Hormotoma subangulata Ulrich and Scofield. Cotypes. to Trenton Ord. Cannon Falls, Minnesota.

45866. Black River (Ord.). Chatfield, and Goodhue County, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1018, pl. 70, figs. 37-41.

45867. Hormotoma trentonensis Ulrich and Scofield. Holotype.

Trenton Ord.: Hader. Minnesota Wykoff. Minnesota in error.

Ulrich and Scofield, Geol. and Nat Hist, Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1017, pl. 70, figs. 13, 14.

35317. Hustedia mormoni Marcou. Plesiotypes.

Marcon Upper Carb. Southeast of Italian Peak, Elk

Mountain. Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 411, pl. 7, figs. 12, 12a, 13.

115623. Hyalæa digitata Guppy.

Holotype.

Miocene. Jamaica.

Guppy, Proc. Sci. Assoc. Trinidad. 1882, p. 176, pl. 7, fig. 16,

115624. **Hyalæa Diacria vendryesiana** Guppy. Holotype. Miocene. Jamaica.

Guppy, Geol. Mag., London, Dec. II. I. 1874, p. 405, pl. 17, fig. 25; Proc. Sci. Assoc. Trinidal, 1882, p. 175.

115625. Hyalæa ventricosa Guppy. Holotype.

Miocene. Jamaica.

Guppy, Proc. Sci. Assoc. Translationship of the plotting, 15.

2106. Hyalina? occidentalis Meek and Hayden Cotypes.

Laramie Cret. . Mouth of Judith River Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX. 1879 p. 547, pl. 42, figs. 6a-L.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 482, pl. 27, fig. 27.

See Helix occidentalis.

46563. Hyalostelia solivaga Ulrich Holotype. Silurian. Spring Valley. Minnesota

Ulrich, Geol. Surv. III., VIII. (Soc. p. 232. pl. 2. fig. 40.

113556. Hydrobia amnicoloides Pilsbry. Holotype. Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

> Pilsbry, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 336, pl. 21, fig. 5.

2149. Hydrobia anthonyi (Meek and Hayden). Holotype and paratypes.

Laramie (Cret.). Thirty miles above mouth of Yellowstone River, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 571, pl. 43, figs. 10a-c.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 465, pl. 27, fig. 39.

See Melania anthonyi.

## 113562. Hydrobia mobiliana Dall.

Cotypes.

Miocene. Near Mobile, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 337.

23121. Hydrobia occulta White. Bear River (Cret.). Twenty miles north of Cokeville,

Cotypes.

Wyoming.

White, Bull. No. 128, U. S. Geol. Surv., 1895, p. 57, pl. 10, figs.

12501. Hydrobia recta White.

Cotypes.

Laramie (Cret.). Near Evanston, Wyoming.

White, Powell's Rept. Geol. Uinta Mountains, 1876, p. 132; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 466, pl. 27, fig. 38; Bull. No. 34, U. S. Geol. Surv., 1886, p. 30, pl. 2, fig. 21.

113559. Hydrobia umbilicata Pilsbry. Cotypes. Pliocene. Caloosahatchie River, near Fort Thompson, 113560.

> Pilsbry, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 337, pl. 21, fig. 9a.

8870. Hydrobia utahensis White.

Florida.

Cotypes.

12498. Bitter Creek (Eocene). Musinia Plateau, Utah.

> White, Powell's Rept. Geol. Uinta Mountains, 1876, p. 132; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 446, pl. 27, fig. 35; Bull. No. 34, U. S. Geol. Surv., 1886, p. 30, pl. 2, fig. 20.

2147. Hydrobia warrenana (Meek and Hayden). Holotype. Laramie (Cret.). Square Butte, thirty miles below Fort Clarke, North Dakota.

> Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 572, pl. 43, figs. 11a-c.-White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 465, pl. 27, fig. 40.

See Melania warrenana.

## 38120. Hylobius lacoei Scudder.

Holotype. '

Florissant (Oligocene). Florissant, Colorado.

Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 92, pl. 10, fig. 15.

15381. Hyolithellus micans (Billings). Plesiotype.
 15382. Lower Cambrian. Troy, and Schodack Landing, New York.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 142, pl. 14, figs. 2-ze; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 624, pl. 79, figs. 1-1e.

17444. **Hyolithellus micans rugosa** Walcott. Holotype. Lower Cambrian. Washington County, New York.

Walcott, Amer. Journ. Sci. (3), XXXIV, 1887, p. 191, pl. 1, fig. 10; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 624, pl. 79, fig. 2.

15388. **Hyolithes americanus** Billings. Plesiotype. Lower Cambrian. Troy, New York.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 132, pl. 13, figs. 6-6f; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 620, pl. 75, figs. 2-2f.

23850. **Hyolithes attenuatus** Walcott. Holotype. Upper Cambrian. Highland Range, Central Nevada.

Walcott, Proc. U. S. Nat. Mus., XIII, 1890, p. 269, pl. 20, figs, 11, 11a.

8579. Hyolithes billingsi Walcott. Plesiotype.

14903. Lower Cambrian. L'Ause au Loup. Labrador: Pioche, 15377. Nevada.

Walcott, Bull. No. 30, U. S. Geol. Surv., 186, p. 134, pl. 13, figs. 1-1d; Tenth Ann. Rept. U. S. Geol. Surv., 186, p. 620, pl. 75, figs. 1-1e.

See Hyolithes primordialis?

14426. **Hyolithes carbonaria** Walcott. Cotypes. Lower Carboniferous. Eureka District. Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 294, pl. 25, fig. 3.

14884. **Hyolithes communis** Billings. Plesiotype. 15387. **Lower** Cambrian. Bic Harbor. Quebec. Canada, and Troy, New York.

Wakott, Rull. No. 3., U. S. Geol. Surv. 1886. p. 135, pl. 14, figs. 3-3c; Tenth Ann. Rept. U. S. Geol. Surv. 1886. p. 520, pl. 77, figs. 3-3c.

15386. Hyolithes communis emmonsi Ford Plesiotype.

Lower Cambrian. Troy. New York.

Walcott, Bull. No. 30, U.S. Geol. Surv. 1886. p. 197. pl. 12. figs. 4-4b; Tenth Ann. Rept. U.S. Geol. Surv. 180. p. 721. pl. 77. figs. 4-4b.

23849. Hyolithes? corrugatus Walcot: C types. Upper Cambrian. Highland Range central Nevalla. Walcott, Proc. U.S. Nat. Mas. XIII. Song at apple 25 fig. 2.

23851. Hyolithes curvatus Wakvit. Crtypes.
Upper Cambrian. Highland Range, central Nevalia
Proc. U.S. Not. Mass. XIII. Sange, central Nevalia

15391. Hyolithes impar Ford.

Plesiotype.

Lower Cambrian. Troy, New York.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 139, pl. 14, figs. 1b, 1d, 1e; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 621, pl. 77, figs. 1b, 1d, 1e.

14995. Hyolithes neapolis Clarke.

Cotype.

Naples (Dev.). Parrish Gully, Naples, New York.

Clarke, Bull. No. 16, U. S. Geol. Surv., 1885, p. 56, pl. 3, figs. 4, 5.

23848. Hyolithes newtoni Walcott.

Cotypes.

Upper Cambrian. Near Deadwood, Black Hills, South Dakota.

Walcott, Proc. U. S. Nat. Mus., XIII, 1890, p. 270, pl. 20, fig. 4.

8579. Hyolithes primordialis Hall?

Plesiotypes.

15377. Lower Cambrian. Pioche, Nevada.

White, Prelim. Rept. U. S. Geogr. Surv., W. 100th Merid., 8vo., 1874, p. 6; Rept. U. S. Geogr. Surv., W. 100th Merid., IV, Pt. I, 1877, p. 37, pl. 1, figs. 5-5e.

= Hyolithes billingsi.

35218. Hyolithes primordialis Hall.

Plesiotypes.

35219. Flathead (Mid. Cambrian). Yellowstone National Park. St. Croix (Mid. Cambrian). Wisconsin.

Walcott, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 454, pl. 63, figs. 2, 2a.

14885. Hyolithes princeps Billings.

Plesiotype.

18320. Lower Cambrian. Bic Harbor, Quebec, Canada, and Conception Bay, Newfoundland.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 135, pl. 13, figs. 5-5b; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 621, pl. 76, figs. 1-1e.

18318. **Hyolithes quadricostatus** Shaler and Foerste. Plesiotype. Lower Cambrian. Conception Bay, Newfoundland.

Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 621, pl. 78, figs. 1-1b.

18317. Hyolithes similis Walcott.

Cotypes.

Lower Cambrian. Conception Bay, Newfoundland.

Walcott, Proc. U. S. Nat. Mus., XII, 1889, p. 38; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 622, pl. 75, figs. 3-3d.

18319. Hyolithes terranovicus Walcott.

Cotypes.

Lower Cambrian. Conception Bay, Newfoundland.

Walcott, Proc. U. S. Nat. Mus., XII, 1889, p. 37; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 623, pl. 78, figs. 3-3d.

17375. Hyolithes vanuxemi Walcott. Cotyr
Upper Pogonip (Ord.). Northeast of Adams Hill. Eur

Upper Pogonip (Ord.). Northeast of Adams Hill, Eur District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 85, pl. 1 figs. 16-16b. Hypsipleura gregaria Stanton. Cotypes.

Knoxville (Lower Cret.). Five miles north of Paskenta,
California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 70, pl. 13, figs. 1, 2.

Hypsipleura? occidentalis Stanton. Cotypes.

Knoxville (Lower Cret.). Three miles northwest of Paskenta, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 70, pl. 13, figs. 3, 4.

Idiotrypa parasitica Ulrich. Holotype and figured sections. Osgood (Sil.). Osgood, Indiana.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 275, pl. 13, figs. 1, 1c.

Idonearca depressa White. Holotype.

Colorado (Cret.). East bank Rio Puerco, six miles below Casa Salazan, New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 183, pl. 18, figs. 13a, b.

= Trigonarca depressa.

Idonearca shumardi (Meek and Hayden). Plesiotypes. Fox Hills (Cret.). Cheyenne River, near Old Woman Fork, Black Hills, Wyoming.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 405, pl. 11, figs. S-11.

=Cucullæa (Idonearca) shumardi.

See Arca (Cucullæa) shumardi.

Eureka District, Nevada.

Illænurus eurekensis Walcott. Cotypes.

Lower Pogonip Camb. Ridge east of Hamburg Ridge.

Walcott, Mon. VIII. U. S. Geol. Surv., 1884, p. 97, pl. 12, figs. 4, 4a.

Illænurus? ida Walcott. Cotypes.

Upper Cambrian. Morgans Creek. Burnett County, Texas.

Walcott, Proc. U. S. Nati. Muss. XIII, (Soc. p. 277, pl. 20, fig. 6.

Ilyanassa Paranassa arata Say . Plesiotype. Plicoene. Waccamaw River. South Carolina.

Pall, Trans. Wagner Free Inst. Sci. Phila III Pt. II. 1842, p. 448 pl. 80 fig. 18

Hyanassa Paranassa isogramma Pall Helotype.

Mixene. Wilmington North Carolina.

Pull Prints Wagner Free Into See Phila III Pt. II 1842. pt. que pl. see fig. in

Byanassa porcina var. schiropyga Pall Hibrtype.
Miocene. Cape Fear River. North Carolina

Doll, Tours. Wagner Free Inst. Ser. Phila. 111 12 11 Nov. 7, 1965.

38034. Ilyodes divisa Scudder. 'Holotype.
Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, p. 422, pl. 38, fig. 1; Foss. Insects N. America, I, 1890, p. 398, pl. 30, fig. 1

38035. Ilyodes elongata Scudder. Holotype.
Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, p. 423, pl. 38, fig. 2; Foss. Insects N. America, I, 1890, p. 399, pl. 30, fig. 2.

25594. Indusia calculosa Scudder. Cotypes. Older Tertiary. Horse Creek, Wyoming.

Scudder, Thirteenth Ann. Rept. U. S. Geol. Surv. Terr., 1890, p. 194, pl. 4, fig. 4.

28950. Inoceramus acutiplicatus Stanton. Cotypes. 28951. Colorado (Cret.). Yellowstone National Park.

Stanton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 637, pl. 75, figs. 9, 10; pl. 76, fig. 1.

12462. Inoceramus altus Meek. Holotype.
Fort Pierre (Cret.). Near Medicine Bow Station, Wyoming.
Meek, Fourth Ann. Rept. U. S. Geol. Surv. Terr., 1871, p. 302;
Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 43, pl. 14, figs.

1-1b.

12285. Inoceramus altus Meek. Plesiotypes.
Fort Benton (Cret.). On Belle Fourche River, ten miles
west of Crow Peak, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 391, pl. 9, fig. 11.

242. Inoceramus aviculoid[e]s Meek and Hayden. Holotype and paratypes.

Niobrara (Cret.). Little Blue River near Kansas-Nebraska line.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1860, p. 181. = Inoceramus labiatus aviculoides.

484. Inoceramus balchii Meek and Hayden. Holotype.
Fort Pierre (Cret.). White River above Bad Lands, South
Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1860, p. 180,—Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 56, pl. 15, figs. 1a, 1b.

Fort Pierre (Cret.). Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1 p. 398, pl. 7, fig. 7; pl. 9, fig. 8.

8621. Inoceramus barabini Morton. Plesiotypes.
Fort Pierre (Cret.). About one mile south of Boulder,
Colorado.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 180, pl. 16, fig. 4a.

8585. Inoceramus crassalatus White. Cotypes.

Jurassic. North Fork of Virgin River, Utah.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 166, pl. 13, figs. 4a, c.

9892. Inoceramus cripsii Mantell. Plesiotype.
Austin (Cret.). San Antonio, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857.

477. Inoceramus cripsii? barabini (Morton). Plesiotypes.
Fort Pierre (Cret.). Yellowstone River near Miles City,
Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 49, pl. 13, figs. 1a-c.

See Inoceramus cuneatus.

p. 152.

4301. Inoceramus cripsii? subcompressus Meek and Hayden.
Holotype.

Fox Hills (Cret.). Mouth of Judith River, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 48, pl. 38, fig. 2 (bis).

See Inoceramus subcompressus.

1261. Inoceramus cripsii? subundatus Meek. Holotype and paratype.

Nanaimo (Cret.). Sucia Islands, and Comox, Vancouver Island.

Meek, Bull. U. S. Geol. and Geogr. Surv. Terr., II, 1876. p. 358, pl. 3, figs. 1, 1a, 3, 3a.

See Inoceramus subundatus.

477. Inoceramus cuneatus Meek and Hayden. Holotype.

Montana (Cret.). Yellowstone River, near Miles City.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila. for 1860, p. 180. = Inoceramus cripsii? barabini.

4460. Inoceramus deformis Meek. Cotypes and plesiotypes.

21119. Colorado (Cret. . Colorado City, and near Canyon City.

Colorado.

Meek, Rept. U. S. Geol. Expl. 40th Part. IV. Pt. I. 1877, p. 146, pl. 14, figs. 4, 4a.—Stanton, Bull. No. 146, U. S. Geol. Surv., 1893, p. 85, pl. 14, fig. 1; pl. 15, figs. 1, 2.

8624. Inoceramus deformis Meek. Plesletypes. Chlorado (Cret.). Five miles above Pueblo. Colorado.

P-a. U. S. Geogr. Sarv. W. rooth Merkin IV Pt. 1 1876.

8622. Inoceramus dimidius White. Cotypes. Colorado (Cret.). Ojo del Piscado, New Mexico.

White, Prelim. Rept. U. S. Geogr. Surv. W. of 100th Merid., 1874, p. 25; Rept. U. S. Geogr. Surv. W. of 100th Merid., IV, 1876, p. 181, pl. 16, fig. 2a-d.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 78, pl. 10, figs. 5, 6.

7850. Inoceramus erectus Meek. Cotypes.

Montana (Cret.). Chalk Creek near Uptown, Utah.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 145, pl. 13, figs. 1, a; pl. 14, fig. 3.

2038. Inoceramus exogyroides Meek and Hayden. Holotype and paratype.

Fort Benton (Cret.). Chippewa Point, near Fort Benton, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1862, p. 26.— Meek, Ninth Ann. Rept. U. S. Geol. Surv. Terr., 1876, p. 46, pl. 5, figs. 3a-3c.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 83, pl. 17, figs. 1, 2.

8618. Inoceramus flaccidus White. Cotypes. Colorado (Cret.). Five miles above Pueblo, Colorado.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 178, pl. 16, fig. 1a.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 80, pl. 13, fig. 1.

20257. Inoceramus fragilis Hall and Meek. Plesiotype.
Colorado (Cret.). Vado del Chamo, New Mexico.

Meek, Rept. Expl. Exped. Santa Fé to junction of Grand a..... Green Riv., Macomb, 1876, p. 127, pl. 1, fig. 6.

228. Inoceramus fragilis Hall and Meek. Plesiotypes.
Fort Benton (Cret.). Near mouth of Vermillion River,
South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 42, pl. 5, fig. 5. See Inoceramus perplexus.

8625. Inoceramus fragilis Hall and Meek. Plesiotype. Colorado (Cret.). Southeast of Paria, Utah.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 178, pl. 15, fig. 3a.

12273. Inoceramus fragilis Hall and Meek. Plesiotypes.
Fort Benton (Cret.). Beaver Creek, Black Hills, South
Dakota

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 390, pl. 9, fig. 10.

8052. Inoceramus fragilis Hall and Meek. Plesiotypes.
12274. Colorado (Cret.). Black Hills of South Dakota; Huerfano
Park, Colorado, etc.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 76, pl.: figs. 1-5.

See Inoceramus howelli and I. perplexus.

8050. Inoceramus gilberti White. Cotypes.
Colorado (Cret.). Near Last Chance Creek, southern
Utah.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879, p. 285, pl. 3, figs. 1a-c.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 79, pl. 14, figs. 3, 4.

8052. Inoceramus howelli White. Cotypes.

Colorado (Cret.). Lower Potato Valley, southern Utah.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879, p. 284, pl. 4, figs. 1a-c.

= Inoceramus fragilis.

22868. Inoceramus labiatus (Schlotheim). Plesiotypes.
Colorado (Cret.). Muddy Creek, Huerfano Park, Colo-

rado, etc. Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 77, pl. 14, fig. 2.

See Inoceramus aviculoides, I. problematicus and varieties, and I. mytilopsis.

9839. Inoceramus mytilopsis Conrad.

Holotype.

Eagle Ford? (Cret.). Texas.

Conrad, Rept. U. S. Mexican Bound, Surv., Emory, I, Pt. II, 1857, p. 152, pl. 5, fig. 6b.

= Inoceramus labiatus.

20247. Inoceramus nebrascensis Owen.

Holotype.

Fort Pierre (Cret.). Sage Creek, Cheyenne River, South Dakota.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, p. 582, pl. SA, fig. 1.

774. Inoceramus oblongus Meek.

Cotypes.

Fort Pierre (Cret.). Fifteen miles north of Greeley, Colorado.

White, Eleventh Ann. Rept. U. S. Geol, Surv. Terr., 1879, p. 285, pl. 2, figs. 14-1b.

2840. Inoceramus ovatus Stanton.

Holotype.

Knoxville Lower Cret. South Fork of Elder Creek, Tehama County, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1845, Feb. 1886, p. 47, pl. 4, fig. 15.

12203. Inoceramus perplexus Whitheld.

12274.

Conview.

Fort Benton Chet . On Belle Fourche River ten miles west of Chow Peak, Black Hills, South Dakota

Whitfield, Regarded and Resources Ruck Hills 1/4/ca 1980, p. par no S. fig. 3, pl. 10, figs. 4, 5.

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182. Inoceramus pertenuis Meek and Hayden. Holotype and paratypes.

Fox Hills (Cret.). Mouth of Judith River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 276.— Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 47, pl. 37, figs. 3a, 3b; pl. 38, figs. 3a, 3b.

See Inoceramus ventricosus.

7802. Inoceramus problematicus (Schlotheim)? Plesiotypes.
Colorado (Cret.). Sulphur Creek, Bear River, Wyoming.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 143, pl. 13, figs. 2a, b.

= Inoceramus labiatus.

237. Inoceramus problematicus (Schlotheim). Plesiotypes.
Niobrara (Cret.). On Little Blue River, near KansasNebraska line.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 62, pl. 9, fig. 3a.

= Inoceramus labiatus.

488. Inoceramus problematicus (Schlotheim). Plesiotypes.
Colorado (Cret.). Bear River, near mouth of Sulphur
Creek, Wyoming.

Meek, Rept. Expl. Great Basin of Utah, Simpson, 1876, p. 358, pl. 4, fig. 1a.

= Inoceramus labiatus.

12281. Inoceramus problematicus (Schlotheim)? Plesiotypes.
Colorado (Cret.). Beaver Creek, Black Hills, South
Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 389, pl. 7, fig. 11.

= Inoceramus labiatus.

8620. Inoceramus problematicus (Schlotheim). Plesiotype.
Colorado (Cret.). Southeast of Paria, Utah.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 177, pl. 16, fig. 3a.

=Inoceramus labiatus.

242. Inoceramus problematicus aviculoides (Meek and Hayden). Holotype and paratypes.

Niobrara (Cret.). Little Blue River, near Kansas-Nebraska

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 63, pl. 9, fig. 4.

= Inoceramus labiatus.

481. Inoceramus proximus Tuomey? Plesiotyp.
Fort Pierre (Cret.). Below Fort Pierre, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 53, pl. 12 figs. 7a, 7b.

479. Inoceramus proximus? subcircularis Meek. Cotypes.
Fort Pierre (Cret.). Yellowstone River, near Miles City,
Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 55, pl. 12, figs. 2a, 2b.

20246. Inoceramus sagensis Owen. Holotype.
Fort Pierre (Cret.). Sage Creek, Cheyenne River, South
Dakota.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, p. 582, pl. 7, fig. 3.

12313. Inoceramus sagensis Owen. Plesiotypes.
Fort Pierre (Cret.). Cheyenne River, near Rapid Creek,
Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 393, pl. 7, fig. 12; pl. 8, fig. 2.

485. Inoceramus sagensis nebrascensis (Owen). Plesiotype.

Fort Pierre (Cret.). White River, above Bad Lands,
South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 52, pl. 13, figs. 2a, 2b.

673. Inoceramus simpsoni Meek. Holotype.
Colorado (Cret.). North Platte River, above Platte
Bridge, South Dakota.

Meek, Proc. Acad. Nat. Sci. Phila., 1860, p. 312; Rept. Expl. Great Basin of Utah, Simpson, 1876, p. 360, pl. 4, fig. 4; Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 142, pl. 13, fig. 3.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 79, pl. 12, fig. 1.

12275. Inoceramus simpsoni Meek? Plesiotype.
Fort Pierre (Cret.). Black Hills, South Dakota.
Whitfold Best Cool and Resources Black Hills, Dakota, 1880.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 395, pl. 9, fig. 9.

12320. Inoceramus simpsoni Meek. Plesiotypes.
Fort Pierre (Cret.). Old Woman Fork, Black Hills,
Wyoming.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 395, pl. 8, fig. 1.

4301. Inoceramus subcompressus Meek and Hayden. Holotype. Fox Hills (Cret.). Mouth of Judith River, Moutana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1860, p. 181. = Inoceramus cripsii? subcompressus.

12276. Inoceramus sublævis Hall and Meek. Plesiotypes.
12277. Fort Pierre (Cret.). Forks of Cheyenne River, and Redwater Valley, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 393, pl. 10

1261. Inoceramus subundatus Meek. Holotype and paratypes. 1348. Nanaimo (Cret.). Komooks, eastern shore of Vancouver Island.

Meek, Proc. Acad. Nat. Sci. Phila., for 1861, p. 315.

=Inoceramus cripsii subundatus.

12314. Inoceramus tenuilineatus Hall and Meek. Plesiotypes.
Fort Pierre (Cret.). Cheyenne River, near Rapid Creek,
Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 400, pl. 9, figs. 12, 13.

1906. Inoceramus tenuirostratus Meek and Hayden. Holotype.
Colorado (Cret.). Chippewa Point, near Fort Benton,
Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1862, p. 27.—Meek, Ninth Ann. Rept. U. S. Geol. Surv. Terr., 1876, p. 59, text fig. 5 (as I. tenuirostris).—Stanton, Rull. No. 106, U. S. Geol. Surv., 1893, p. 83, pl. 16, figs. 3, 4.

9874. Inoceramus texanus Conrad. Holotype.
Cretaceous. Western Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 152, pl. 5, fig. 7.

- 480. Inoceramus umbonatus Meek and Hayden. Holotype and paratypes.
- 2039. Colorado (Cret.). Near Fort Benton, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1858, p. 50.— Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 44, pl. 3, figs. 1a-c; pl. 4, figs. 1a, 1b, 2a, 2b.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 81, pl. 18, figs. 1, 2.

1909. Inoceramus undabundus Meek and Hayden. Holotype and paratypes.

Colorado (Cret.). Chippewa Point, near Fort Benton, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1862, p. 26.— Meek, Ninth Ann. Rept. U. S. Geol. Surv. Terr., 1876, p. 60, pl. 3, figs. 2a, 2b.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 84, pl. 16, figs. 1, 2.

483. Inoceramus vanuxemi Meek and Hayden. Holotype.
Fort Pierre (Cret.). White River, above Bad Lands, South
Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1860, p. 180.— Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 57, pl. 14, figs. 2a, 2b.

12296. Inoceramus vanuxemi Meek and Hayden. Plesiotypes. Fort Pierre (Cret.). Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 396, pl. 7, figs. 8, 9; var. p. 398, fig. 10. 182. Inoceramus ventricosus Meek and Hayden. Holotype and paratypes.
Fox Hills (Cret.). Mouth of Judith River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 87.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 87. = Inoceramus pertenuis.

30210. Inoceramya concentrica Ulrich. Cotypes. Lias? Woody Island, Kadiak, Alaska.

Ulrich, Harriman Alaska Exped., IV, 1904, p. 135, pl. 12, figs. 1, 2; pl. 13, fig. 1.

4,3378. Intrapora cosciniformis Nicholson. Plesiotype and figured section.

Hamilton (Dev.). Arkona, Canada.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 532, pl. 43, figs. 6, 6a.

7864. Iphidea (??) sculptilis Meek. Cotypes.
Upper Cambrian. Above Gallatin City, east side of Gallatin River, Montana.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 479.

= Iphidea sculptilis.

See Kutorgina sculptilis and K. minutissima.

R212. Iphidea sculptilis Meek. Plesiotypes.
Flathead (Mid. Cambrian). Gallatin Range, Yellowstone
National Park.

Walcott, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 447, pl. 60, figs. 5, 5a-c.

See Iphidea : ?? \ sculptilis and Kutorgina sculptilis.

113480. Isapis caloosaënsis Dall. Holotype.

Pliocene. Caloosahatchie River, Florida,

Pall, Trans, Wagner Free Inst. Sci. Phila., III, Ph. I. (Sqc., pl., q., fig. 10)

Fessirus Isipis anomala.

112805 Ischnochiton tampaénsis Pall Holotype. Oligocene Rallast Point, Tampa, Florida.

Dall Trans Wagner Free Inst. Sci. Phila. III Ft. II. 1922. p. 2522. pl. 25. fg. 25.

40.00 Isohyrina winchelli Billings — Plastotype Upper Ordovician - Annoisti Island Ordf of St. Lawrence

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46207. Ischyrodonta elongata Ulrich. Holotype and plesiotype.
46208. Richmond (Ord.). Oxford, Ohio, and Richmond, Indiana.
Ulrich, Amer. Geol., VI, 1890, p. 175; Geol. Surv. Ohio, VII, 1893, p. 675, pl. 54, figs. 20, 21.

46209. Ischyrodonta miseneri Ulrich. Holotype. Richmond (Ord.). Richmond, Indiana.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 675, pl. 54, figs. 10, 11.

46210. Ischyrodonta modioliformis Ulrich. Cotypes. Richmond (Ord.). Richmond, Indiana.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 676, pl. 54, figs. 4-9.

46211. Ischyrodonta ovalis Ulrich.

Richmond (Ord.). Near Richmond, Indiana.

Ulrich, Nineteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn., 1892, p. 242; Geol. Surv. Ohio, VII, 1893, p. 674, pl. 54, figs. 12-15.

46212. Ischyrodonta truncata Ulrich. Cotypes. Richmond (Ord.). Oxford, Ohio.

Ulrich, Amer. Geol., VI, 1890, p. 174, figs. 11a-e; Geol. Surv. Ohio, VII, 1893, p. 672, text figs. a-e.

46213. Ischyrodonta unionoides (Meek). Plesiotypes.
Lorraine (Ord.). Covington, Kentucky.
Ulrich, Geol. Surv. Ohio, VII, 1893, p. 677, pl. 54, figs. 1-3.

Isocardia carolina Dall. Holotype. Miocene. Edgecombe County, North Carolina.
 Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1067, pl. 46, fig. 22.

115773. Isocardia floridana Dall. Holotype. Vicksburgian (Oligocene). Arredondo, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1066, pl. 46, figs. 21, 26.

30235. Isocardia medialis (Conrad). Plesiotypes.
Buda (Lower Cret.). Near Austin, Texas.

Shattuck, Bull. No. 205, U. S. Geol. Surv., 1903, p. 27, pl. 14, figs. 4, 5; pl. 15, figs. 1, 2.

41289. Isochilina amiana Ulrich. Holotype. Chazy? (Ord.). Sussex street, Ottawa, Canada.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 180, pl. 11, figs. 12a-12c.

41290. Isochilina amiana insignis Ulrich. Holotype. Chazy? (Ord.). Sussex street, Ottawa, Canada.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 181, i pl. 11, fig. 13.

41291. Isochilina ampla Ulrich.

Cotypes.

Trenton (Ord.). Nashville, Tennessee.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 179, pl. 11, figs. 8a-d.

41292. Isochilina jonesi Wetherby.

Plesiotype.

Trenton (Ord.). Near Harrodsburg, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 179, pl. 11, figs. 9a-c.

43155. Isochilina kentuckyensis Ulrich.

Holotype.

Stones River (Ord.). High Bridge, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 179, pl. 11, figs. 11a-d.

Leperditia armata.

41826, Isochilina rectangularis Ulrich.

Holotype.

Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 182, pl. 16, figs. 2a-c.

41288. Isochilina saffordi Ulrich.

Holotype.

Trenton (Ord.). Nashville, Tennessee.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 178, pl. 11, figs. 104-d.

11204. Isochilina subnodosa Ulrich.

Holotype.

Plastotype.

Trenton (Ord.). Perryville, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890. p. 177, pl. 11, fig. 74-c.

Rengt. Isotelus cyclops Green.

Mohawkian (Ord.). Western New York.

Green, Mon. Priksbites N. America, Phila., 1832, p. 69. Cast No. 22

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5005. Isotelus planus DeKay.

Plastotype.

Utica (Ord.). Near Newport, Kentucky.

Green, Mon. Trilobites N. America, Phila., 1832, p. 68. Cast No. 23.

= Isotelus platycephalus.

4895. Isotelus stegops Green.

Plastotype.

Utica (Ord.). Newport, Kentucky.

Green, Mon. Trilobites N. America, Phila., 1832, p. 71. Cast Nos. 26, 27.

= Isotelus platycephalus.

41902. Isotelus susæ Whitfield.

Plesiotype.

Richmond (Ord.). Two miles east of Spring Valley, Minnesota.

Clarke, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 708, figs. 10, 11.

43376. Isotrypa (?Tectulipora) gothlandica Ulrich. Holotype and figured sections.

Silurian. Island of Gotland, Sweden.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 678, pl. 54, figs. 6, 6c.

18445. Isoxys chilhoweana Walcott.

Cotypes.

Lower Cambrian. Near Montvale Springs, Chilhowee Mountain, Tennessee.

Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 626, pl. 80, figs. 10, 10a.

35056. Jaekelocystis avellana Schuchert.

Holotype.

Manlius (Sil.). Near Keyser, West Virginia.

Schuchert, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 226, text fig. 28; pl. 37, figs. 11, 12.

35055. Jaekelocystis hartleyi Schuchert.

Cotypes.

Manlius (Sil.). Near Keyser, West Virginia.

Schuchert, Amer. Geol., XXXII, 1903, p. 231; Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 224, text fig. 27, pl. 37, figs. 4-8.

35057. **Jaekelocystis papillatus** Schuchert. Holotype and paratype. Manlius (Sil.). Near Keyser, West Virginia.

Schuchert, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 225, pl. 37, figs. 9, 10.

41497. Jonesella crassa Ulrich.

Cotypes.

Black River (Ord.). St. Paul, Minnesota.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 123, 1 7, figs. 11a-c.

=Ctenobolbina crassa.

41359. Jonesella crepidiformis (Ulrich). Cotypes Utica (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 122, p 7, figs. 8a-c.

See Leperditia crepiformis.

41358. Jonesella digitata Ulrich. Holotype Richmond (Ord.). Marion County, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 122, p. 7, figs. 10a-c.

41529. Jonesella obscura Ulrich. Cotypes Trenton (Ord.). Near Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, P II, 1894, p. 668, pl. 44, figs. 17-19.

41360. Jonesella pedigera Ulrich. Holotyp€
Utica (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 122, p 7, figs. 9a, b.

114674. Julia floridana Dall.

Cotypes

Oligocene. Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, 1 811, pl. 35, figs. 1, 2, 3.

38110. Jupiteria charon Scudder. Holotype Florissant (Oligocene). Florissant, Colorado.

Scudder, Eighth Ann. Rept. U. S. Geol. Surv., 1889, p. 450, p. 52, figs. 14, 15.

26703. Karlia minor Walcott.

Middle Cambrian. Manuels Brook, Conception Bay
Newfoundland.

Walcott, Proc. U. S. Nat. Mus., XI, 1888, p. 445.

43158. Kirkbya (? Barychilina) costata (McCoy). Plesiotype Spergen Hill (Miss.). Columbia, Illinois.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 208, pl 18, figs. 2a, 2b.

41581. Kirkbya cymbula Ulrich.

Cotypes

Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIX, 1900, p. 184, pl 8, figs. 15-18.

41580. Kirkbya germana Ulrich. Cotypes
Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIX, 1900, p. 185, pl 8, figs. 19-22.

41356. Kirkbya lindahli Ulrich.

Holotype

Warsaw (Miss.). Colu-

Ulrich, Journ. Cincin 18, figs. 6a-c XIII, 1890, p. 207, pl

41354. Kirkbya oblonga Jones and Kirkby. Plesiotype.

Chester (Miss.). Grayson Springs, Kentucky; Chester, 41355. Illinois.

> Ulrich, Journ, Cincinnati Soc. Nat. Hist., XIII, 1890, p. 206, pl. 18, figs. 4a, b; 5a, b.

41351. Kirkbya parallela Ulrich.

Holotype.

Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 192, pl. 15, figs. 2a, b.

41700. Kirkbya semimuralis Ulrich.

Cotypes.

Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 193, pl. 15, figs. 3a, b; 4a-c.

41352. Kirkbya subquadrata Ulrich.

Holotype.

Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 192, pl. 15, figs. 1a-c.

41357. Kirkbya tricollina Jones and Kirkby. Plesiotype. Chester (Miss.). Grayson Springs, Kentucky.

> Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 207, pl. 18, figs. 8a, b.

41353. Kirkbya venosa Ulrich.

to

Holotype.

Chester (Miss.). Gravson Springs, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 208, pl. 18, figs. 3a, b.

45868. Kokenia costalis Ulrich and Scofield. Holotype. Trenton (Ord.). Cannon Falls, Minnesota.

> Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 882, pl. 64, figs. 46-49.

Krausella arcuata Ulrich. Cotypes. 41717

Stones River (Ord.). High Bridge, Kentucky; Mineral Point, Wisconsin; Minneapolis, Minnesota. 41719.

> Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 692, pl. 44, figs. 47-53.

41727. Krausella inæqualis Ulrich.

Holotype.

Stones River (Ord.). Dixon, Illinois.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 692, pl. 44, figs. 44-46.

37967. Kustarachne tenuipes Scudder.

Holotype.

Upper Coal Measures. Mazon Creek, Grundy County, Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, p. 450, pl. 40, fig. 7; Foss. Insects N. America, 1890, p. 426, pl. 32, mg. 7.

15337. Kutorgina cingulata (Billings). Plesiotyr.
Lower Cambrian. Two miles east of Swanton, Vermor

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 102, pl. 9, fil 1-1h; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 609, fil 1-1h.

- 15329. **Kutorgina labradorica** (Billings). Plesiotyp Lower Cambrian. Two miles east of Swanton, Vermor
  - Walcott, Bull. No. 30. U. S. Geol. Surv., 1886, p. 104, pl. 9, fil 2-2b.
  - = Iphidea labradorica swantonensis.
- 18309. Kutorgina labradorica (Billings). Plesiotyr Lower Cambrian. Conception Bay, Newfoundland.

Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 609, pl. (figs. 3-3b.

= Iphidea labradorica.

15329. Kutorgina labradorica swantonensis Walcott. Cotyp.
Lower Cambrian. East of Swanton, Vermont.

Walcott, Proc. U. S. Nat. Mus., Vol. XII, 1889, p. 36; Tenth A1 Rept. U. S. Geol. Surv., 1890, p. 609, pl. 69, figs. 2-2b.

= Iphidea labradorica swantonensis. See Kutorgina labradorica 15329.

24551. Kutorgina minutissima Hall and Whitfield. Cotype Upper Cambrian. Eureka District, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th. Par., IV, Pt. 1877, p. 207, pl. 1, figs. 11, 12.

= Iphidea sculptilis.

See Kutorgina sculptilis.

15331. **Kutorgina pannula** (White). Holotype and plesiotype 15333. Lower Cambrian. Pioche, Nevada, and Washingt County, New York.

Walcott, Amer, Journ. Sci. 3., XXXIV, 1887, p. 190, pl. 1, fi
14. (4b; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 609,
60, figs. 5-5f; Bull. No. 30, U. S. Geol. Surv., 1886, p. 1
pl. 7, figs. 3, 3a; pl. S. figs. 2-2c.

= Iphidea pannula.

See Trematis? pannulus.

- 15335. **Kutorgina prospectensis** Walcott. Cotyp Lower Cambrian. Prospect Mountain, Eureka Distri Nevada.
  - Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 19, pl. 9, fi 1a, tb; Bull. No 30, U. S. Geol. Surv., 1886, p. 106, pl. 9, fi 3, 3a; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 610, 80, figs. 4, 4a.
  - = Iphidea prospectensis.

7864. Kutorgina sculptilis (Meek). Cotypes and plesiotypes. 24550. Upper Cambrian. Eureka District, Nevada.

24551. Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 20, pl. 1, figs. 7-7b; pl. 9, fig. 7.

= Iphidea sculptilis.

See Kutorgina minutissima.

24591. **Kutorgina whitfieldi** Walcott. Cotypes. Middle Cambrian. Secret Canyon, Eureka District, Nevada. Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 18, pl. 9, £gs. 4-4b. = Billingsella whitfieldi.

25593. Labiduromma tertiarum (Scudder). Cotype. Florissant (Oligocene). Florissant, Colorado.

Scudder, Thirteenth Ann. Rept. U. S. Geol. Surv. Terr., 1890, p. 209, pl. 16, fig. 18.

26151 Laotira cambria Walcott. Cotypes. to Middle Cambrian. Coosa Valley, Alabama.

26274. Walcott, Mon. XXX, U. S. Geol. Surv., 1898, p. 32, pls. 5-19, 21-23, text figures 11-13; Proc. U. S. Nat. Mus., XVIII, 1896, p. 613, pl. 32, figs. 1-8.

46564. Lasiocladia hindei Ulrich. Holotype. Keokuk (Miss.). Kings Mountain, Kentucky.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 249

25591. Lasius terreus Scudder. Holotype.
Older Tertiary. Green River, Wyoming.

Scudder, Thirteenth Ann. Rept. U. S. Geol. Surv. Terrs., 1890, p. 618, pl. 10, fig. 23.

11547. Latia dallii White. Cotypes.

Miocene. Fifty miles below Salmon Forks, Snake River,
Idaho.

White, Proc. U. S. Nat. Mus., V, 1882, p. 100, pl. 5, figs. 17-20; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 451, pl. 32, figs. 37-40.

112122. Latirus callimorphus Dall. Holotype.
Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Ph'la., III, Pt. I, 1890, p. 107, pl. 8, fig. 1.

112116. Latirus floridanus Heilprin. Plesiotype.
Oligocene. Ballast Point, Tampa, Florida.

Dall. Trans. Wayner Free Inst. Sci. Phila. III. Pt. I. 1800. p.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 106, pl. 8, fig. 2.

Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 10

97497. Latirus hypsipettus Dall. Holot;
Pliocene. Near Fort Thompson, Caloosahatchie Ri
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 189 108, pl. 10, fig. 5.

135158. Latirus indistinctus Aldrich. Holoty
Eocene. Wayne County, Mississippi.

Aldrich, The Nautilus, VII, No. 9, 1894, p. 99, pl. 4, fig. 6.

112123. Latirus rugatus Dall.

Oligocene. Ballast Point, Tampa, Florida.

Holoty

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. pl. 8, figs. 6, 7.

97496. Latirus tessellatus Dall. Holoty Pliocene, Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. pl. 10, fig. 8a.

38003. Latzelia primordialis Scudder. Holoty
Upper Coal Measures. Mazon Creek, Grundy Coui
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, p. 419, pl fig. 3; Foss. Insects N. America, I. 1890, p. 395, pl. 30, fi

8035. Lecythiocrinus olliculæformis White. Holoty
Upper Carboniferous. Thirty miles west of Humbo
Kansas.

White, Proc. U. S. Nat. Mus., II, 1880, p. 257, pl. 1, figs. Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1883, p. 124 35, figs. 2a, 2b.

= Menocrinus olliculæformis.

145627. Leda acala Dall. Holoty Chickasawan (Eocene). Woods Bluff, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 189 586, pl. 32, fig. 3.

145656. Leda acrybia Dall. Coty Miocene. Plum Point, Maryland.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV. p. 590.

157829. Leda alæformis (Gabb).

Plesioty

Lower Tejon (Eocene). One mile southeast of Lc Lake, Lake County, California.

Stanton, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. I, p. 1040, pl. 64, figs. 6, 7.

135140. Leda albirupina Harris. Coty
Eocene. White Bluff, Arkansas River, Arkansas.

Harris, Ann. Rept. Geol. Surv. Arkansas, II, 1894, p. 148, 1 fig. 1.

145657. Leda amydra Dall.

Holotype.

Miocene. Near Plum Point, Maryland.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 591.

1948. Leda bisulcata Meek and Hayden.

Holotype.

Montana (Cret.). Deer Creek, North Platte, Wyoming. Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1861, p. 440. See Nuculana bisulcata, 1948, 12265.

115553. Leda bisulcata Guppy.

Holotype.

Oligocene. Jamaica.

Guppy, Geol. Mag., London, Dec. I, IV, 1867, p. 500, fig. 2; Proc. Sci. Assoc. Trinidad, 1882, p. 173, pl. 7, fig. 7.

=Leda indigena.

145646. Leda catasarca Dall.

Holotype.

Eocene. Waltubbee Hills, Clarke County, Mississippi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 588, pl. 32, fig. 13.

115558. Leda clara Guppy. -

Holotype.

Miocene. Jamaica.

Guppy, Geol. Mag., London, Dec. II, I, 1874, p. 442, pl. 17, figs. 1, 1a; Proc. Sci. Assoc. Trinidad, 1882, p. 172, pl. 7, fig. 4.

24331. Leda diversa (Hall).

Plesiotype

Middle Devonian. Ereré, Brazil.

Clarke, Archivos do Mus. Rio de Janeiro, X, 1899, p. 78, pl. 8 fig. 12.

135823. Leda dodona Dall.

Holotype.

Oligocene. Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 589, pl. 32, fig. 6.

145651. Leda flexuosa Heilprin.

Plesiotypes.

Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898. p. 589, pl. 38, figs. 5, 5a.

157840. Leda gabbi (Conrad).

Plesiotypes.

Lower Tejon (Eocene). About one mile east of Lower Lake, Lake County, California.

Stanton, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. I, 1897, p. 1041, pl. 64, fig. 8.

23049. Leda glabra Stanton.

Holotype.

Knoxville (Lower Cret.). Near Stephenson, **Tehama** County, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 53, pl. 6, fig. 15.

I 15024. Leda hypsoma Dall. Holotype. Miocene. Natural Well, Duplin County, North Carolina.
 Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 589, pl. 32, fig. 2.

115556. Leda illecta Guppy. Cotype. Eocene. Manzanillo, Trinidad, West Indies.

Guppy, Proc. Sci. Assoc. Trinidad, 1867, p. 174; ibid., 1882, p. 173, pl. 7, fig. 5.

Oligocene. Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 591.

Oligocene. Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 591.

162528. Leda minuta præcursor Arnold. Holotype.
Pleistocene. San Pedro, California.
Arnold, Mem. Cal. Acad. Sci., III, 1903, p. 97, pl. 17, fig. 6.

145635. Leda multilineata Conrad. Plesiotypes.
Oligocene. Vicksburg, Mississippi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 588, pl. 25, figs. 11, 11b.

I 15559. Leda peltella Dall. Holotype.
Oligocene. Jamaica.
Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 579,

pl. 32, fig. 5.

115557. Leda perlepida Guppy. Holotype.
Pliocene. Matura, Trinidad.

Guppy, Proc. Sci. Assoc. Trinidad, 1867, p. 173; Geol. Mag., London, Dec. II, I, 1874, p. 442, pl. 18, fig. 9.

145659. Leda phalacra Dall. Holotype.
Miocene. Plum Point, Maryland.
Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 592.

145633. Leda pharcida Dall. Holotype. Chickasawan (Eocene). Woods Bluff, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 587.
pl. 32, fig. 8.

3957. Leda subscitula Meek and Hayden. Cotypes.
Permian. Near mouth of Smoky Hill River, Kansas.

Meek and Hayden, Trans. Albany Inst., IV, 1858, p. 79.

= Yoldia? subscitula.

Cotypes. Oligocene. Alum Bluff, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 590, pl. 32, figs. 4, 12.

21768. Leiocidaris hemigranosus (Shumard). Plesiotype.
Denison (Lower Cret.). Texas.

Clark, Bull. No. 97. U. S. Geol. Surv., 1893, p. 38, pl. 9, figs. 1a-c.

Leioclema. See Lioclema.

Leiopistha. See Liopistha.

13882. Leiopteria rafinesquii Hall. Plesiotype.
Middle Devonian. Eureka District, Nevada.
Walcott, Mon.VIII, U. S. Geol. Surv., 1884, p. 166, pl. 5, figs. 10, 10a.

Leiorhynchus. See Liorhynchus.

115443. Leiostraca clavata Guppy. Holotype. Pliocene. Matura, Trinidad, British West Indies. Guppy, Geol. Mag., London, Dec. II, I, 1874, p. 408, pl. 18, fig. 16.

41304. Leperditella canalis Ulrich. Holotype. Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 637, pl. 43, figs. 1-3.

41315. Leperditella? dorsicornis Ulrich. Holotype. Richmond (Ord.). Savannah, Illinois.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 639, pl. 45, figs. 19, 20, 20a.

See Leperditia (? Primitia) dorsicornis.

41307. Leperditella germana Ulrich. Holotype. Stones River (Ord.). Mineral Point, Wisconsin.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 638, pl. 45, figs. 24–26.

See Leperditia germana.

41306. Leperditella macra Ulrich. Holotype.
Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 638, pl. 43, figs. 7-9.

41308. Leperditella persimilis Ulrich. Holotype. Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 637, pl. 43, figs. 4-6.

41312. Leperditia æquilatera Ulrich. Holotype. Stones River (Ord.). High Bridge, Kentucky.

Ulrich, Amer. Geol., X, 1892, p. 265, pl. 9, figs. 9-11.

=Leperditella æquilatera.

- 41281. Leperditia appressa Ulrich. Coty 41282. Trenton (Ord.). Near Harrodsburg and Danville, I tucky.
  - Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 176 11, figs. 5a-5d.
- 15401. Leperditia? argenta Walcott. Coty Middle Cambrian. One mile below Argenta, Big Cot wood Canyon, Utah.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 146, pl. 8, f

- 41365. Leperditia bivertex Urich. Holoty Utica (Ord.). Covington, Kentucky.
  - Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 11, 1 figs. 5, 5a.
- 17411. Leperditia bivia White. Coty
  Middle Ordovician. Queen Spring Hill, Schell C
  Range, Nevada.
  - White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., p. 11; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, 1 1877, p. 58, pl. 3, figs. 7a-7d.
- 41276. Leperditia cæcigena Miller. Plesioty
  Richmond (Ord.). Indian Kentuck Creek, near Madi
  Indiana.
  - Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 171 11, figs. 6a-6d.
- Trenton (Ord.). Frankfort, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 17;

- 41359. Leperditia crepiformis Ulrich. Coty Utica (Ord.). Covington, Kentucky.
  - Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 10, 1 figs. 3, 3a.
  - = Jonesella crepidiformis.
- 17448. Leperditia (Isoxys) dermatoides Walcott. Holot Lower Cambrian. Washington County, New York.

Walcott, Amer. Journ. Sci. (3), XXXIV, 1887, p. 192, pl. 1, 13, 13a; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 62 80, figs. 1, 1a.

41315. Leperditia (? Primitia) dorsicornis Ulrich.
Richmond (Ord.). Savannah, Illinois.

Ulrich, Amer. Geol., X, 1892, p. 267, pl. 9, figs, 24-26.

- = Leperditella dorsicornis.
- 41263. Leperditia fabulites (Conrad). Plesioty 41267. Stones River (Ord.). Beloit, Wisconsin; Lebanon, nessee.

Ulrich, Jour, Cincinnati Soc. Nat. Hist., XIII, 1890, p. 173, I figs 1a-1d; 2.

41261. Leperditia fabulites (Conrad). Plesiotypes. Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 634, pl. 43, figs. 10-14.

41834. Leperditia fimbriata Ulrich. Holotype.
Richmond (Ord.). Near Spring Valley, Minnesota.

Ulrich, Amer. Geol., X, 1892, p. 268, pl. 9, figs. 34-36.

= Aparchites fimbriatus.

41307. Leperditia germana Ulrich.

Stones River (Ord.). Mineral Point, Wisconsin.

Ulrich, Amer. Geol., X, 1892, p. 266, pl. 9, figs. 16-18.

= Leperditella germana.

41828. Leperditia granilabiata Ulrich. Holotype.
Black River (Ord.). St. Paul, Minnesota.
Ulrich, Amer. Geol., X, 1892, p. 268, pl. 9, figs. 31-33.
= Aparchites granilabiatus.

41311. Leperditia inflata Ulrich. Cotypes.
Stones River (Ord.). High Bridge, Kentucky.
Ulrich, Amer. Geol., X, 1892, p. 265, pl. 9, figs. 12-15.
= Leperditella inflata.

41272. Leperditia linneyi Ulrich. Cotypes.
Trenton (Ord.). Near Harrodsburg, Kentucky.
Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 174, pl. 11, figs. 3a-3e.

41837. Leperditia millepunctata Ulrich. Holotype. Stones River (Ord.). Fountain, Minnesota.

Ulrich, Amer. Geol., X, 1892, p. 268, pl. 9, figs. 37-39.

= Aparchites millepunctatus.

41309. Leperditia mundula Ulrich. Cotypes.
Stones River (Ord.). High Bridge, Kentucky.
Ulrich, Amer. Geol., X, 1892, p. 265, pl. 9, figs. 4-8.

= Leperditella mundula.

41844. Leperditia nicklesi Ulrich. Cotypes. Chester (Miss.). Grayson Springs Station, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 200, pl. 18, figs. 1a-e.

41711. Leperditia radiata Ulrich. Cotypes.

Utica (Ord.). First Ward, Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 9, pl. 7
figs. 2, 2a, 2b.

=Elpe radiata.

14005. Leperditia rotundata Walcott. Cotypes.

Middle Devonian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 206, pl. 16, fig. 5.

41825. Leperditia (?) subrotunda Ulrich. Holotype.
Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 181, pl. 16, figs. 1a-c.

41313. Leperditia sulcata Ulrich.

Holotype.

Stones River (Ord.). High Bridge, Kentucky.

Ulrich, Amer. Geol., X, 1892, p. 266, pl. 9, figs. 19-21.

=Leperditella sulcata.

41314. Leperditia sulcata ventricornis Ulrich. Holotype. tones River (Ord.). High Bridge, Kentucky.

Ulrich, Amer. Geol., X, 1892, p. 266, pl. 9, figs. 22, 23.

=Leperditella sulcata ventricornis.

41310. Leperditia tumida Ulrich.

Holotype.

Stones River (Ord.). High Bridge, Kentucky.

Ulrich, Amer. Geol., X, 1892, p. 264, pl. 9, figs. 1-3.

=Leperditella tumida.

41284. Leperditia tumidula Ulrich.

Holotype.

'renton (Ord.). Danville, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 175, pl. 11, figs. 4a-4c.

41467. Leperditia unicornis Ulrich.

Holotype.

Utica (Ord.). One mile west of Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 10, pl. 7, figs. 4, 4a, 4b.

= Primitiella unicornis.

34131. Lepidodiscus alleganius Clarke.

Cotype.

Chemung (Dev.). Near Sabinsville, Tioga County, Pennsylvania.

Clarke, Bull. 49, N. Y. State Museum, 1901, p. 194, pl. 10, fig. 3.

46533. Lepidolites dickhauti Ulrich.

Cotypes.

Utica (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 21, pl. 7, figs. 17-17b;
 Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. 1, 1893, pl. F, figs. 11, 12.

See Lepidolites elongatus.

46533. Lepidolites elongatus Ulrich.

Holotype.

Utica (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 22, pl. 7, fig. 16.

= Lepidolites dickhauti.

35062. Lepocrinites manlius Schuchert. Holotype. Manlius (Sil.). Near Keyser, West Virginia.

Schuchert, Smithsonian Misc. Coll., Quart., XLVII, 1904, pp. 214, 215, text fig. 23, pl. 37, figs. 2, 3; pl. 39, figs. 15, 16.

17219. Leptæna melita Hall and Whitfield. Cotypes.
Upper Cambrian. Eureka, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 208, pl. 1, figs. 13, 14.—Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 22.

= Dalmanella melita.

8552. Leptæna sericea Sowerby.
Richmond (Ord.). Silver City, New Mexico.

Plesiotypes.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 70, pl. 4, fig. 7.

= Plectambonites sericea.

17875. Leptæna trilobata Owen.

Holotype.

Trenton (Ord.). Turkey River, Iowa.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, p. 584, pl. 2, figs. 17, 18.

=Strophomena trilobata.

13880. Leptodesma transversa Walcott. Holotype. Upper Devonian. The Gate, near Eureka, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 167, pl. 5, fig. 13.

15308. Leptomitus zitteli Walcott. Cotypes. Lower Cambrian. Parker's Quarry, Georgia, Vermont.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 89, pl. 2, figs. 2, 2a; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 597, pl. 49, figs. 1, 1a.

24528. Leptopora typa Winchell. Plesiotype. Kinderhook (Miss.). Burlington, Iowa.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 122, pl. 34, figs. 12a, 12b.

8230. Leptopora winchelli White. Cotypes. Carboniferous. Near Forks of Logan River, Utah.

White, Bull. No. 5, U. S. Geol. Surv. Terr., 1879, p. 211; Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1880, p. 121, pl. 34, fig. 11a.

7895. Leptosolen conradi Meek. Holotype and paratype. Mentor (Cret.). Twelve miles southwest of Salina, Kansas.

Meek, Fourth Ann. Rept. U. S. Geol. Surv. Terr., 1871, p. 311; Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 253, pl. 2, figs. 12 12b. 43189. Leptotrypa acervulosa Ulrich. Holotype and figure section

Trenton (Ord.). Decorah, Iowa.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. 1893, p. 318, pl. 27, figs. 24, 25.

=Cyphotrypa acervulosa.

43611. Leptotrypa claviformis Ulrich. Cotypes and figured section Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. 1893, p. 319, pl. 27, figs. 20, 21.

43718. Leptotrypa clavis Ulrich. Cotypes and figured section Utica (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 161, pl. figs. 3, 3a.

=Stigmatella clavis.

43677. Leptotrypa cortex Ulrich.
Utica (Ord.). Newport, Kentucky.

Holotyp

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 162.

43309. **Leptotrypa filiosa** D'Orbigny. Figured sections plesiotyp

Trenton (Ord.). Calhoun County, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 456, pl. 36, figs. 7, 7a.

= Amplexopora filiosa.

44057. Leptotrypa hexagonalis Ulrich. Holotyp Stones River (Ord.). Mineral Point, Wisconsin.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 455, pl. 36, figs. 6, 6a.

43676. Leptotrypa minima Ulrich. Cotypes and figured section Lorraine (Ord.). Hamilton, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 159, pl. figs. 2-2b.

43678. Leptotrypa ornata Ulrich. Cotypes and figured section Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 160, 1 6, figs. 4, 4a.

43395. Leptotrypa semipilaris Ulrich. Cotypes and figure section

Lorraine (Ord.). Covington, Kentucky.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 457, pl. 36, figs. 5-5d.

=Cyphotrypa semipilaris.

43394. Leptotrypa stidhami Ulrich. Cotypes and figured section Richmond (Ord.). Brown County, Ohio.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 456, pl. 36, figs. 4-4b.

=Cyphotrypa stidhami.

25532. Lepyrus? evictus Scudder. Holotype.
Older Tertiary. Green River, Wyoming.
Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 88, pl. 10, fig. 10.

38223. Lestes (Stenolestes) iris Scudder. Cotypes. Upper Miocene. Oeningen, Baden, Germany.
Scudder, Geol. Mag., London, Dec. IV, II, 1895, p. 119, pl. 6, fig. 3.

41949. Lichas (Hoplolichas) bicornis Ulrich. Holotype.
Richmond (Ord.). Two miles east of Spring Valley,
Minnesota.

Ulrich, Amer. Geol., X, 1892, p. 272, figs. 2, a, b. = Platymetopus bicornis.

40690. Lichas harrisi Miller. Holotype. Richmond (Ord.). Waynesville, Ohio.

Miller, Journ. Cincinnati Soc. Nat. Hist., I, 1878, p. 106, pl. 3, fig. o.

41950. Lichas (Hoplolichas) robbinsi Ulrich. Holotype.
Trenton (Ord.). Wykoff, Minnesota.
Ulrich, Amer. Geol., X, 1892, p. 271, figs. 1a, b.
= Platymetopus robbinsi.

43038. Lichas trentonensis Hall. Cotype.
Lorraine (Ord.). Lebanon, Ohio.

Hall, Nat. Hist. New York, Pal. I, 1847, p. 235, pl. 64, fig. 1e.

= Lichas halli.

42950. Lichenaria minor Ulrich. Holotype.
Trenton (Ord.). Cannon Falls, Minnesota.
Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1893, p. 84, fig. 5.

107803. Lima (Mantellum) caloosana Dall. Holotype.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.
Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898,

p. 767, pl. 28, fig. 3.

107801. Lima (Mantellum) carolinensis Dall. Holotype.
Miocene. Darlington Court-House, South Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898,
p. 767, pl. 35, fig. 21.

28932. Lima cinnabarensis Stanton. Holotype.
Jurassic. Cinnabar Mountain, Montana.

Stanton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p.
pl. 72, fig. 8.

9831. Lima leonensis Conrad. Cotypes.

Washita (Lower Cret.). Leon Springs, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 151, pl. 5, figs. 3a-c.

23025. Lima multilineata Stanton. Cotypes. Knoxville (Lower Cret.). Near Stephenson, Tehama County, California.

> Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 36, pl. 2, figs. 4, 5.

157826. Lima multiradiata Gabb.

Plesiotypes.

Lower Tejon (Eocene). One mile southeast of Lower Lake, Lake County, California.

Stanton, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. I, 1897, p. 1038, pl. 63, figs. 7, 8.

12530. Lima (Plagiostoma) occidentalis Hall and Whitfield.

Holotype. Jurassic. Flaming Gorge, Uinta Range, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 292, pl. 7, fig. 23.

6486. Lima retifera Shumard. Plesiotypes. Upper Carboniferous. Nebraska City, Nebraska.

> Meek, Final Rept. U. S. Geol. Surv. Nebraska, 1872, p. 188, pl. 9, figs. 5a, 5b. - White, Thirteenth Ann. Rept. Geol. Surv. Indiana, 1884, p. 138, pl. 28, fig. 4.

30217. Lima shumardi Shattuck.

Holotype.

Buda (Lower Cret.). Probably Austin, Texas.

Shattuck, Bull. No. 205, U. S. Geol. Surv., 1903, p. 17, pl. 5, fig. 11.

107800. Lima (Lima) smirna Dall. Oligocene. Hillsborough Bay, near Tampa, Florida.

Holotype.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 766, pl. 30, fig. 3.

107797. Lima (Lima) tampaënsis Dall. Holotype. Oligocene. Hillsborough Bay, near Tampa, Florida.

> Dall, Tranc. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 766, pl. 35, fig. 18.

107799. Lima (tampaënsis var.?) costulata Dall. Holotype. Oligocene. Hillsborough Bay, near Tampa, Florida.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 766, pl. 35, fig. 24.

22942. Lima utahensis Stanton.

Cotypes.

Colorado (Cret.). Southeast of Paria and Upper Kanab Valley, Utah.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 71, pl. 9, fig. 5. See Lima wacoensis 8656.

107795. Lima (Lima) vicksburgiana Dall. Holotype. Oligocene. Levy County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 765, pl. 35, fig. 20.

8656. Lima wacoensis Roemer. Plesiotypes. Colorado (Cret.). Southeast of Paria, Utah.

White, Rept. U. S. Geogr. Surv. W. 100th merid., IV, Pt. I, 1876, p. 176, pl. 17, figs. 4a-c.

=Lima utahensis.

9889. Lima wacoensis Roemer.

Plesiotypes.

Washita (Lower Cret.). Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 151, pl, 5, figs. 4a, 4b.

30218. Lima wacoensis Roemer.

Plesiotype.

Buda (Low. Cret.). Near Austin, Texas.

Shattuck, Bull. No. 205, U. S. Geol. Surv., 1903, p. 18, pl. 5, fig. 10.

135679. Limæa solida Dall.

Cotypes.

Oligocene. Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 769, pl. 35, figs. 4, 5.

25526. Limalophus compositus Scudder. Cotypes.
Older Tertiary. Green River, Wyoming.
Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 71, pl. 10, fig. 2.

25528. Limalophus contractus Scudder. Cotypes.
Older Tertiary. Green River, Wyoming.
Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 72, pl. 10, fig. 3.

27102. Limipecten texanus Girty. Holotype and paratypes. Cisco (Upper Carb.). Graham, Young County, Texas.
Girty, Proc. U. S. Nat. Mus., XXVII, 1904, p. 722, pl. 45, figs.

1-3; pl. 46, fig. 4?; pl. 47, figs. 1-3.

27103. Limipecten texanus grandicostatus Girty. Holotype. Cisco (Upper Carb.). Graham, Young County, Texas.

Girty, Proc. U. S. Nat. Mus., XXVII, 1904, p. 723, pl. 46, figs. 1-3.

.20056. Limnæa? accelerata White. Cotypes.

Jurassic. Eight miles north of Canyon City, Colorado.

White, Bull. No. 29, U. S. Geol. Surv., 1886, p. 20, pl. 4, figs. 12-15.

20054. Limnæa ativuncula White. Cotypes.

Jurassic. Eight miles north of Canyon City, Colorado.

White, Bull. No. 29, U. S. Geol. Surv., 1886, p. 20, pl. 4, figs. 10, 11.

8207. Limnæa? compactilis Meek. Holotype.
Laramie (Cret.). Separation Station, Wyoming.
White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 445, pl. 26, fig. 14.

20055. Limnæa consortis White. Cotypes. Jurassic. Eight miles north of Canyon City, Colorado. White, Bull. No. 29, U. S. Geol. Surv., 1886, p. 20, pl. 4, figs. 8, 9.

8097. Limnæa (Polyrhytis) kingii Meek. Holotype.
Miocene. Cache Valley, Utah.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 192, text figs. 6, 7.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 446, pl. 32, figs. 30, 31.

8907. Limnæa (Leptolimnæa) minuscula White. Cotypes. Eocene. Three miles east of Table Rock Station, Wyoming.

White, Proc. U. S. Nat. Mus., III, 1880, p. 160; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 446, pl. 29, figs. 24, 25.

20065. Limnæa (Leptolimnæa) minuscula White. Plesiotype. Eocene. Wales, Utah.

White, Bull. No. 34, U. S. Geol. Surv., 1886, p. 22, pl. 2, figs. 10-12.

685. Limnæa nitidula Meek. Cotypes.

Bear River (Cret.). Bear River, near mouth of Sulphur

Creek, Wyoming.

Meek, Rept. Expl. Great Basin of Utah, Simpson, 1876, p. 363, pl. 5, fig. 14.

See Limnæa (Limnophysa) nitidula.

23116. Limnæa nitidula Meek. Cotypes. Bear River (Cret.). Sulphur Creek, Wyoming.

White, Bull. No. 128, U. S. Geol. Surv., 1895, p. 45, pl. 6, figs. 1-3.

12500. Limnæa (Limnophysa) nitidula Meek. Plesiotypes.

Bear River (Cret.). Mouth of Sulphur Creek, Wyoming.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 181,

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 181, pl. 17, figs. 5, 5a.—White, Third Ann. Rept. U.S. Geol. Surv., 1883, p. 445, pl. 6, figs. 15, 16.

See Limnæa nitidula and Melania? nitidula.

2119. Limnæa shumardi Meek. Holotype.

White River (Miocene). Pinots Creek, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 599, pl. 45, figs. 6a, 6b.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 446, pl. 32, figs. 28, 29.

692. Limnæa similis Meek.
 694. Eocene. Hams Fork, northeast of Fort Bridger, Wyoming.

Meck, Proc. Acad. Nat. Sci. Phila., 1860, p. 314; Rept. Expl. Great Basin of Utah, Simpson, 1876, p. 307, pl. 5, figs. 2a, b; Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 191, pl. 17, figs. 3, a.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 445, pl. 29, figs. 20, 21.

12488. Limnæa tenuicosta Meek and Hayden. Holotype.

Laramie (Cret.). Three miles below Fort Union, North
Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 119. =Limnæa (Pleurolimnæa) tenuicostata.

12488. Limnæa (Pleurolimnæa) tenuicostata (Meek and Hayden).

Holotype.

Laramie (Cret.). Three miles below Fort Union, North Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 534, pl. 44, figs. 13a-c.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 445, pl. 23, fig. 24.

See Limnæa tenuicosta.

693. Limnæa vetusta Meek.

Cotypes.

Eccene. Hams Fork, northeast of Fort Bridger, Wyoming.

Meek, Proc. Acad. Nat. Sci. Phila., for 1860, p. 314; Rept. Expl. Great Basin of Utah, Simpson, 1876, p. 367, pl. 5, figs. 3a, 3b.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 445, pl. 29, figs. 22, 23.

693. Limnæa (Limnophysa) vetusta Meek. Cotypes. Eocene. Hams Fork, northeast of Fort Bridger, Wyoming. Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 191, pl. 17, figs. 4a, b.

350. Limopsis parvula (Meek and Hayden). Holotype and paratypes.

Montana (Cret.). Yellowstone River, near Miles City, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 97, pl. 28, figs. 17a-c.

See Pectunculina parvula.

107152. Limopsis subangularis Guppy. Holotype.
Upper Oligocene. Pointapier, Trinidad, West Indies.
Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 325, pl. 30, fig. 2

13878. Limoptera sarmenticia Walcott. Cotypes.

Middle Devonian. Brush and Atrypa Peaks, Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 167, pl. 5, figs. 3-3b.

396. Linearia? formosa (Meek and Hayden). Holotype.
Fox Hills (Cret.). Twenty miles below Cannon Ball Rive
on the Missouri, North Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 199, pl. 30, fig. See Tellina? formosa.

14286. Lingula mytiloides Sowerby. Plesioty
Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 279, pl. 18, fig

3650. Lingula ovata Dana.

Cotyp

Carboniferous. Black Head, District of Illawarra, N South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 685, Atlas, pl figs. 6, 6a, 6b.

[Not a Lingula, probably a pelecypod.]

45211. Lingula philomela Billings.

Plastoty

Richmond (Ord.). Granger, Minnesota.

Winchell and Schuchert, Geol. and Nat. Hist. Surv. Minn., Fi Rept., III, Pt. I, 1893, p. 342, pl. 29, figs. 7, 8.

178(x). Lingula pinnaformis Owen.

Coty

Middle Cambrian. Falls of the St. Croix, Minnesota.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, p. 5
pl. 1 B, fig. 8.

- Lingulepis pinnaformis.

1027. Lingula prima Conrad.

Plesiotyp

Upper Cambrian. Black Hills, South Dakota.

Meek and Hayden, Amer. Journ. Sci. (2), XXXIII, 1862, p. 7; Lingulepis prima.

Lingula prima Owen, 1852 = Lingulepis pinnaformis.

17873. Lingula quadrata Eichwald?

Plesioty

Trenton (Ord. . Near Dubuque, Iowa.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, pl. : fig. 8.

(This appears to be the same specimen figured in Geol. Et lowa, Wis., and Ill., 1844, pl. XV, fig. 1.]

Lingula iowensis.

2443: Lingula scotica Pavidson?

Plastoty-

Berea Miss . Berea Ohio.

Meck Good Sun Ohio, Pal. II, 1875, p. 276, pl. 14, fig. 4.

:455: Lingula scotica nebrascensis Meek

Holoty

Upper Carboniferous. Nebraska City Nebraska.

Mock 1964 Rept U.S. God Sam. Nebraska Haydem 122
p. 188-pl. S. figs. 34, 35

Lingula Glossina nebrasecusis

Keep Langula subspatula tal Hall and Meek Plessocyth Chetacours Ten miles sontheast of Fort Wingate, N Mexico.

> WY IN NOW I SHEART SET WILLIAM XETTE IN THE STATE SERVICE BY AN

14977. Lingula triquetra Clarke. Holotype.
Naples (Dev.). Naples, New York.
Clarke, Bull. No. 16, U. S. Geol. Surv., 1885, p. 62, pl. 3, fig. 11.

13770. Lingula whitei Walcott. Cotypes.
Middle Devonian. Atrypa Peak, Eureka District, Nevada.
Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 109, pl 13, fig. 3.

44996. Lingula whitfieldi Ulrich. Plastotype.
Trenton (Ord.). Covington, Kentucky.
Ulrich, Amer. Geol., III, 1889, pp. 378, 381, fig. 3.

45195. Lingulasma galenensis Winchell and Schuchert.

Plastotypes. of Hamilton,

Trenton (Ord.). Bear Creek, just south of Hamilton, Fillmore County, Minnesota.

Winchell and Schuchert, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 354, pl. 30, figs. 1-4.

45194. Lingulasma schucherti Ulrich. Plastotype. Richmond (Ord.). Wilmington, Illinois.

Ulrich, Amer. Geol. III, 1889, p. 389, figs. 5, 5a on p. 378.

Lingulella. See also Obolus (Lingulella).

15325. Lingulella cælata (Hall). 17439. Lower Cambrian. Troy, N Plesiotype.

Lower Cambrian. Troy, New York.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 95, pl. 7, figs. 1b, 1d; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 607, pl. 67, figs. 1b, 1e.

15319. Lingulella ella (Hall and Whitfield). Plesiotype.

15321. Lower Cambrian. Chisholm Mine, Ely Mountains, near
Pioche, Nevada, and Box Elder Canyon, Utah.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 97, pl. 7, fig. 2; pl. 8, figs. 4-4e; Tenth Ann. Rept. U. S. Geol. Surv., 1890. p. 607, pl. 67, figs. 2-2e.

See Lingulepis ella.

17440. Lingulella granvillensis Walcott. Cotype. Lower Cambrian. Washington County, New York.

Walcott, Amer. Jour. Sci. (3), XXXIV, 1887, p. 188, pl. 1, figs. 15-15c; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 607, pl. 67, figs. 4-4d.

24587. Lingulepis cuneolus Whitfield. Cotypes.
Upper Cambrian. Red Canyon Creek, Black Hills, South
Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880. p. 336, pl. 2, figs. 5,6.

=Obolus (Lingulella) perattenuatus.

Lingulepis dakotensis Meek and Hayden. See Lingulepis niformis.

15321. Lingulepis ella Hall and Whitfield. Holoty
Middle Cambrian. Canyon above Calls Fort, Wahse
Range, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt 1877, p. 232, pl. 1, fig. 8.

=Lingulella ella.

24552. Lingulepis mæra Hall and Whitfield. Coty]
Upper Cambrian. Eureka District, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt 1877, p. 206, pl. 1, figs. 5-7.

24553. Lingulepis? minuta Hall and Whitfield. Coty<sub>1</sub>
Upper Cambrian. Eureka District, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt 1877, p. 206, pl. 1, figs. 3, 4.

=Linnarssonella minuta.

24589. Lingulepis perattenuatus Whitfield. Coty<sub>1</sub>
Upper Cambrian. Red Canyon Creek, Black Hills, So
Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1 p. 337, pl. 2, figs. 7-9.

17860. Lingulepis pinnaformis (Owen). Plesioty<sub>]</sub>
Middle Cambrian. Falls of St. Croix, Wisconsin.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, pl. fig. 2 (figured as Lingula antiqua and L. prima).

24588. Lingulepis pinnaformis (Owen). Plesioty]
Upper Cambrian. Headwaters of Red Canyon Cre
Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1 p. 335, pl. 2, figs. 1-4.

1026. Lingulepis pinniformis (Owen). Holotype and paratyj Upper Cambrian. Central part of Black Hills, So Dakota.

> Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Knc No. 172, XIV, 1864, pp. 2, 3, pl. 1, figs. 1-1b.—Whitf Rept. Geol. and Resources Black Hills Dakota, 1880, p. pl. 2, figs. 10, 11 (as L. dakotensis).

See Lingula antiqua, L. prima, and L. pinnaformis.

Upper Cambrian. Central part of Black Hills, Sc. Dakota.

Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Kno No. 172, XIV, 1864, p. 3, pl. 1, figs. 2-2b.

=Obolella polita.

45197. Lingulops granti Hall and Clarke. Plastoty
Niagaran (Sil.). Hamilton, Ontario, Canada.

Hall and Clarke, Nat. Hist. New York, Pal. VIII, Pt. I, 1892, 19, 173, pl. 4 k, figs. 14, 15.

45196. Lingulops whitfieldi Hall. Plastotype.

Maquoketa (Ord.). Maquoketa Creek, twelve miles northwest of Dubuque, Iowa.

Hall, Twenty-third Rept. New York State Cab. Nat. Hist., 1873, pl. 13, figs. 1, 2.

- 35287. Linnarssonella girtyi Walcott. Cotypes.
  Middle Cambrian. Deadwood, Black Hills, South Dakota.
  Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 602
- 24553. Linnarssonella minuta (Hall and Whitfield). Cotypes.
  Upper Cambrian. Eureka District, Nevada.
  Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 603.
  See Lingulepis? minuta.
- 35288. Linnarssonella tennesseensis Walcott. Cotypes.
  35289. Middle Cambrian. Near Knoxville, and near Post Oak
  Springs, Roane County, Tennessee.
  Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 604.
- 17441. Linnarssonia sagittalis taconica (Walcott). Cotypes.
  Lower Cambrian. Washington County, New York.

  Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 610, pl. 68, figs. 1-1d; Proc. U. S. Nat. Mus., XXV, 1902, p. 596.

  See Linnarssonia taconica.
- 17441. Linnarssonia taconia Walcott. Cotypes.

  Lower Cambrian. Washington County, New York.

  Walcott, Amer. Journ. Sci. (3), XXXIV, 1887, p. 189, pl. 1, figs.
  18-18d.

  = Linnarssonia sagittalis taconica.
- 135106. Liochlamys bulbosa Heilprin. Plesiotypes.
  Pliocene. Caloosahatchie River, near Fort Thompson,
  Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 101,
  pl. 7, fig. 10b.
- 43777. Lioclema? araneum Ulrich. Cotypes and figured sections. Chester (Miss.). Chester, Illinois.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 431, pl. 75, figs. 9a-9c.
- 43333. Lioclema foliatum Ulrich. Figured sections of holotype. Warsaw (Miss.). Warsaw, Illinois.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 301, fig. 1, p. 431.
- 43209. Lioclema monroei Ulrich and Bassler. Holotype and figured sections.

  Hamilton (Dev.). Bethany, New York.

  Ulrich and Bassler, Smithsonian Mice Coll, Quart, XLVII, 1994.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 39, pl. 11, figs. 10-12.

- 43675. Lioclema punctatum (Hall). Plesiotype and figured sections.
  - Warsaw (Miss.). Warsaw, Illinois.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 141.

- 44067. Lioclema punctatum (Hall). Plesiotype and figured sections.
  - Keokuk (Miss.). Keokuk, Iowa.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 39, pl. 11, figs. 7-9.

- 43775. Lioclema subglobosum Ulrich. Figured section of holotype. Kinderhook (Miss.). Marshalltown, Iowa.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 428, pl. 75, figs. 8a, 8b.
- 43774. Lioclema wachsmuthi Ulrich. Figured sections of holotype. Kinderhook (Miss.). Marshalltown, Iowa.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 428, pl. 75, figs. 7a, 7b.
- 43776. Lioclema wilmingtonense Ulrich. Figured sections of holotype.
  Richmond (Ord.). Wilmington, Illinois.
  - Ulrich, Geol. Surv. Ill., VIII, 1890, p. 426, pl. 34, figs. 4a, 4b.
- 44063. Lioclemella ohioensis (Foerste). Figured sections of plesiotype.

Clinton (Sil.). Dayton, Ohio.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 39, pl. 12, figs. 6-9.

- 20491. Liopeplum spillmani (Tuomey). Plesiotype. 111800. Ripley (Cret.). Tippah County, Mississippi.
  - Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 82, pl. 6, fig. 12.
- 111801. Liopeplum subjugosum (Gabb). Plesiotype.
  Ripley (Cret.). Tippah County, Mississippi.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 83, pl. 6, fig. 12a.
- 22898. Liopistha (Psilomya) concentrica Stanton. Cotypes. Colorado (Cret.). Huerfano Park, Colorado.

  Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 119, pl. 26, figs. 8-10.
- 22899. Liopistha (Psilomya) elongata Stanton. Cotypes. Colorado (Cret.). Upper Kanab Valley, Utah.

  Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 119, pl. 26, figs.
- 8647. Liopistha (Psilomya) meeki White. Cotypes and plesiotypes.
  Colorado (Cret.). Paria, and Upper Kanab Valley, Utah.
  Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 118, pl. 26, figs. 5-7.

8647. Liopistha (Psilomya) meekii White. Cotypes. Colorado (Cret.). Southeast of Paria, Utah.

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 1874, p. 26; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 186, pl. 18, figs. 14 a, c, d.

187. Liopistha (Cymella) undata (Meek and Hayden).

Holotype and paratype.

Fox Hills (Cret.). Mouth of Judith River, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 236, pl. 39, figs. 1a, 1b.

See Pholadomya undata.

8658. Liopistha (Cymella) undata (Meek and Hayden).

Plesiotype.

Montana (Cret.). Gallinas Creek, New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 187, pl. 18, fig. 15a.

1978. Lioplacodes veternus (Meek and Hayden). Holotype.

Jurassic. Head of Wind River, Wyoming.

Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Knowl. No. 172, XIV, 1864, p. 116, text fig.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 470, pl. 3, fig. 9; Bull. No. 29, U. S. Geol. Surv., 1886, p. 23, pl. 4, fig. 18.

See Melania (Potodoma veterna.

8161. Lioplax endlichi (White).

Cotypes.

Bear River (Cret.). Seven miles north of Evanston, Wyoming.

White, Bull. No. 128, U. S. Geol. Surv., 1895, p. 60, pl. 10, figs. 4, 5. See Goniobasis endlichi.

111937. Lioplax floridana Dall.

Holotype.

Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 3, pl. 1, fig. 3.

24317. Liopteria sawkinsi Clarke.

\*Holotype.

Middle Devonian. Rio Curua, Brazil.

Clarke, Archivos do Mus. Rio de Janeiro, X, 1899, p. 49, text fig.

35178. Liorhynchus haguei Girty.

Holotype.

Madison (Miss.). Crowfoot Ridge, Gallatin Range, Yellowstone National Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 543, pl. 69, figs. 5a, 5b.

14981. Liorhynchus (?) hecate Clarke.

Cotypes.

Genesee (Dev.). Bristol, New York.

Clarke, Bull. No. 16, U. S. Geol. Surv., 1885, p. 31, pl. 3, fig. : [Probably the same as Spirifera pluto Clarke.]

14182. Liorhynchus quadricostatus (Vanuxem)? Plesiotypes. Lower Carboniferous. White Pine Mountains, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 79, pl. 3, figs. 9-9b.

46060. Liospira abrupta Ulrich and Scofield. Cotypes. Stones River (Ord.). Murfreesboro, Tennessee.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 995, pl. 82, figs. 35-38.

45869. Liospira? angulata Ulrich. Cotypes.
Black River (Ord.). Mercer County, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1000, pl. 69, figs. 42-46.

45870. Liospira angustata Ulrich and Scofield. Cotypes. Trenton (Ord.). Wykoff, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 997, pl. 68, figs. 35-37; pl. 69, figs. 1, 2.

45871. Liospira decipiens Ulrich. Holotype. Stones River (Ord.). Murfreesboro, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 998, pl. 82, figs. 39-41.

17902. Liospira lenticulare (Sowerby). Plesiotype. Trenton (Ord.). Elkader, Turkey River, Iowa.

Owen, Rep. Geol. Surv. Wis., Iowa, and Minn., 1852, pl. 2, fig. 14 (as Pleurotomaria sp. undet.).

45872. Liospira micula (Hall). Plesiotypes. Utica (Ord.). Covington, Kentucky.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 994, pl. 68, figs. 24-29.

45873. Liospira modesta Ulrich and Scofield. Holotype. Black River (Ord.). Chatfield, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 995, pl. 82, figs. 42-44.

45874. Liospira? mundula Ulrich. Cotypes. Trenton (Ord.). Danville, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 999, pl. 69, figs. 37-41.

45875. Liospira obtusa Ulrich and Scofield. Cotypes. Stones River (Ord.). Dixon, Illinois.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 997, pl. 68, figs. 30-34.

45876. Liospira persimilis Ulrich. Cotypes. Trenton (Ord.). Hartsville, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 998, pl. 68, figs. 45-47.

45877 Liospira progne (Billings). Plesiotypes.
to Trenton (Ord.). Wykoff, Minnesota, Hartsville, Ten45880. nessee, and Burgin, Kentucky.

Stones River (Ord.). Murfreesboro, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 996, pl. 68, figs. 38-44.

45881. Liospira? rugata Ulrich. Holotype. Richmond (Ord.). McKinneys, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 999, pl. 69, figs. 33-36.

46061. Liospira subconcava Ulrich. Cotypes. Stones River (Ord.). Murfreesboro, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 999, pl. 69, figs. 30-32.

45882 Liospira vitruvia (Billings). Plesiotypes. to Stones River (Ord.). Beloit, Wisconsin, Minneapolis and Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 995, pl. 69, figs. 3-5, 7, 8.

35233. Liostracus parvus Walcott. Holotype.
Middle Cambrian. Pebble Creek, Yellowstone National
Park.

Walcott, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 463, pl. 65, fig. 6.

Oligocene. Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 410, pl. 23, fig. 3.

112575. Liotia (Arene) coronata Dall. Cotypes.
Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 409, pl. 17, figs. 2, 2a.

113085. Liotia (Arene?) millium Dall. Holotype.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 409, pl. 18, fig. 4.

Pliocene. Caloosahatchie River, Florida.

Holotype.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 409, pl. 19, figs. 2, 2b.

107095. Liotia siderea Guppy. Holotype. Oligocene. Vendryes, Jamaica, West Indies. Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 324, pl. 27, fig. 18,

112576. Liotia (Arene) solariella Heilprin. Plesiotypes.
Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 408, pl. 17, figs. 1, 1a.

107092. Liotia veresimilis Guppy. Holotype. Oligocene. Vendryes, Jamaica, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 324, pl. 27, fig. 13.

109314. Lirodiscus protractus (Meyer). Plesiotype. Claibornian (Eocene). Claiborne, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1484. See Astarte protracta.

1566. Lirodiscus wailesii Dall.

Holotype.

Jacksonian (Eocene). Jackson, Mississippi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1483, pl. 57, fig. 21.

8661. Lispodesthes lingulifera White. Cotypes. Colorado (Cret.). East of Mount Taylor, one mile south of Pajuate, New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 192, pl. 18, figs. 2a, b.

=Lispodesthes nuptialis.

8660. Lispodesthes nuptialis White. Holotype.

8661. Colorado (Cret.). Five miles west of Mineral Spring, Arizona.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876,
p. 192, pl. 18, figs. 3a, b.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 147, pl. 31, figs. 5, 6.

See Anchura nuptialis and Lispodesthes lingulifera.

8076. Lispodesthes? obscurata White.

Cotypes.

Colorado (Cret.). Near Pueblo, Colorado.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 30, pl. 11, figs. 7a, 7b.

=Pugnellus fosiformis.

38094. Lithomylacris augusta Scudder.

Holotype.

Upper Coal Measures. Port Griffith Switchback, Pennsylvania.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1879, p. 48, pl. 5, figs. 2, 3; Foss. Insects N. America, I, 1890, p. 68, pl. 5, figs. 2, 3.

38095. Lithomylacris pauperata Scudder. Holotype.
Upper Coal Measures. Port Griffith Railroad Cut, near
Pittston, Pennsylvania.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, p. 409, pl. 32, fig. 5; Foss. Insects N. America, I, 1890, p. 385, pl. 24, fig. 5.

38096. Lithomylacris pittstoniana Scudder. Holotype. Upper Coal Measures. Port Griffith, Pennsylvania.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1879, p. 50, pl. 5, figs. 4, 10; Foss. Insects N. America, I, 1890, p. 70, pl. 5, figs. 4, 10.

154369. Lithophaga nuda Dall.

Cotypes.

Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 800, pl. 11, fig. 7; pl. 35, fig. 27.

8211. Lithostrotion mamillare Castelnau.

Plesiotype.

St. Louis (Miss.). Monroe County, Indiana.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 159, pl. 40, fig. 6a.

=Lithostrotion canadense.

24546. Lithostrotion whitneyi Meek.

Cotypes.

Upper Carboniferous. Boxelder Peak, Wahsatch Range, Utah.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 58, pl. 6, figs. 1-1c.

8480. Lithostrotion whitneyi Meek.

Plesiotypes.

Upper Carboniferous. Fossil Hill, White Pine County, Nevada.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 103, pl. 6, figs. 1a-1c.

5119. Lithotrochus andii (d'Orbigny).

Plesiotypes.

Jurassic. Coquimbo, Chile, and San Felipe, Peru.

Conrad, U. S. Naval Ast. Exped. S. Hemisphere, 1855, II, p. 283, pl. 41, fig. 3.

9285. Lophophyllum expansum White.

Holotype.

Keokuk (Miss.). Henry County, Iowa.

White, Proc. Acad. Nat. Sci. Phila., 1876, p. 27; Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1883, p. 157, pl. 39, figs. 4a, 4b.

6552. Lophophyllum proliferum (McChesney). Plesiotypes.
 8500. Upper Carboniferous. Nebraska City, Nebraska; Springfield, Illinois.

Meek, Final Rept. U. S. Geol. Surv. Neb. (Hayden), 1872, p. 144, pl. 5, figs. 4a, 4b.—White, Rept. U. S. Geogr. Surv., W. 100th Merid., IV, Pt. I, 1877, p. 101, pl. 6, fig. 4e.

8499. Lophophyllum proliferum sauridens White. Cotypes. Upper Carboniferous. Near Santa Fe, New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 101, pl. 6, figs. 4a-4d.

45885. Lophospira abnormis Ulrich.

Cotypes.

Trenton (Ord.). Covington, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt 1897, p. 974, pl. 73, figs. 36-40.

45886. Lophospira acuminata Ulrich and Scofield. Holotype. Richmond (Ord.). Near Richmond, Indiana.

> Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 973, pl. 73, fig. 8.

45887. Lophospira ampla Ulrich.

Cotypes.

45888. Richmond (Ord.). Boyle County, Kentucky; Richmond, Indiana (Newport, Kentucky, in error).

Ulrich, Geol, and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 981, pl. 73, figs. 52-54.

45880. Lophospira augustina (Billings).

Plesiotype.

Trenton (Ord.). Stewartsville, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 987, pl. 71, figs. 1, 2.

45890. Lophospira augustina minnesotensis Ulrich and Scofield.

Cotypes.

Trenton (Ord.). Stewartsville, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 988, pl. 71, figs. 3, 4.

46062. Lophospira bicincta (Hall). Plesiotypes.

47611. Stones River (Ord.). Murfreesboro, Tennessee, Beloit, 47612.

Wisconsin, and Dixon, Illinois.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 964, pl. 72, figs. 1-3.

45891. Lophospira bowdeni (Safford). Plesiotypes.

Richmond (Ord.). Boyle County, Kentucky.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 986, pl. 72, figs. 40-43.

46063. Lophospira centralis Ulrich.

Holotype.

Stones River (Ord.). Murfreesboro, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II. 1807, p. 970, pl. 73, fig. 9.

45802. Lophospira concinnula Ulrich and Scofield. Cotypes.

Black River (Ord.). Cannon Falls and St. Paul, Minne-45893. sota.

> Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1807, p. 966, pl. 72, figs. 16-19.

45804. Lophospira conoidea Ulrich.

Holotype.

Trenton (Ord.). Nashville, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1807, p. 070, pl. 73, fig. 22.

45895. Lophospira conradana Ulrich and Scofield. Cotypes. Stones River (Ord.). Minneapolis, Minnesota.

> Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 072, pl. 72, figs. 29-32.

45896. Lophospira decursa Ulrich. Holotype.

Trenton (Ord.). Burgin, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 975, pl. 73, fig. 10.

45897. Lophospira elevata Ulrich and Scofield. Cotypes.
45898. Trenton (Ord.). Kenyon, Minnesota, and near Burgin,
Kentucky.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 977, pl. 73, figs. 11, 13, 14.

45899. Lophospira fillmorensis Ulrich and Scofield. Cotypes.
45900. Trenton (Ord.). Wykoff and near Fountain, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final
Rept. III, Pt. II, 1897, p. 967, pl. 72, figs. 20–24.

45901. Lophospira helicteres wisconsinensis Ulrich and Scofield.
45902. Cotypes.
Stones River (Ord.). Beloit, Wisconsin; Dixon, Illinois.
Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final
Rept. III, Pt. II, 1897, p. 971, pl. 72, figs. 25, 26, 28.

45903. Lophospira humilis Ulrich. Cotypes.
Trenton (Ord.). Near Burgin, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 968, pl. 72, figs. 12-15.

46064. Lophospira? knoxvillensis Ulrich. Cotypes.
Stones River (Ord.). Near Knoxville, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 889, pl. 65, figs. 38-40.

45904. Lophospira (Seelya?) lirata Ulrich. Holotype.
Utica (Ord.). Newport, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 988, pl. 72, figs. 56, 57.

45905. Lophospira (Seelya?) lirata obsoleta Ulrich. Holotype.

Utica (Ord.). Newport, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 988, pl. 72, figs. 58, 59.

45906. Lophospira medialis Ulrich and Scofield. Cotypes.
45907. Trenton (Ord.). Near Burgin, Kentucky; Middle Tennessee.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 973, pl. 73, figs. 23-29.

45908. Lophospira medialis burginensis Ulrich. Cotypes.
Trenton (Ord.). Burgin, Kentucky.

Ulrich Geol and Nat Hist Surv Minn Final Rept. III Pt I

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I. 1897, p. 974, pl. 73, figs. 30-31.

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45909. Lophospira? notabilis Ulrich. Holot
Black River (Ord.). Central Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, P 1897, p. 990, pl. 72, figs. 33-35.

45910. Lophospira obliqua Ulrich and Scofield. Coty
Trenton (Ord.). Near Burgin, Kentucky.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., 1 Rept., III, Pt. II, 1897, p. 967, pl. 72, figs. 6-8.

45911. Lophospira oweni Ulrich and Scofield. Coty
45912. Black River (Ord.). Chatfield and near Cannon F
Minnesota.

Ulrich and Scofield, Geol. and Nat Hist. Surv. Minn., 1 Rept., III, Pt. II, 1897, p. 980, pl. 73, figs. 41-45.

46065. Lophospira peracuta Ulrich and Scofield. Coty
46066. Black River (Ord.). St. Paul, Minnesota.
Stones River, (Ord.). Lebanon, Tennessee.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., 1 Rept., III, Pt. II, 1897, p. 976, pl. 73, figs. 15-17.

46067. Lophospira perangulata (Hall). Plesioty
Stones River (Ord.). Murfreesboro, Tennessee.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn.,
Rept., III, Pt. II, 1897, p. 972, pl. 73, figs. 1-7.

45913. Lophospira perforata Ulrich and Scofield. Coty
45914. Trenton (Ord.). Jo Daviess County and Carroll Cou
Illinois.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Rept., III, Pt. II, 1897, p. 984, pl. 73, figs. 32-35.

45915. Lophospira perlamellosa Ulrich. Holot Richmond (Ord.). Hanover, Ohio. Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, I 1897, p. 985, pl. 73, figs. 55, 56.

46068. Lophospira procera Ulrich.

Stones River (Ord.). Murfreesboro, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., II.
II, 1897, p. 968, pl. 72, fig. 9.

45916. Lophospira producta Ulrich. Holot Trenton (Ord.). Nashville, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, I 1897, p. 975, pl. 73, fig. 21.

45917. Lophospira pulchella Ulrich and Scofield.
45918. Trenton (Ord.). Burgin, Kentucky.
Richmond (Ord.) Spring Valley, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Rept., III, Pt. II, 1897, p. 982, pl. 73, figs. 46-48.

45919. Lophospira quadrisulcata Ulrich and Scofield. Holotype.
Richmond (Ord.). Two miles east of Spring Valley,
Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 967, pl. 72, figs. 10, 11.

45920. Lophospira saffordi Ulrich.

Cotypes.

Trenton (Ord.). Lindsleys Hill, near Lebanon, and Davidson County, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 982, pl. 73, figs. 49-51.

to Stones River (Ord.). Dixon, Illinois; Minneapolis, Minnesota; Beloit and Janesville, Wisconsin.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 968, pl. 72, figs. 51-55; pl. 73, fig. 57.

45926. Lophospira spironema Ulrich and Scofield. Cotypes.
45927. Black River (Ord.). Chatfield and Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 983, pl. 72, figs. 44-47.

45928. Lophospira sumnerensis (Safford). Cotypes and plesiotypes.

Trenton (Ord.). Sumner County, Tennessee.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 978, pl. 73, figs. 18-20.

See Murchisonia sumnerensis.

45932.

45929. Lophospira tenuistriata Ulrich. Cotypes. Utica (Ord.). Newport, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 983, pl. 72, figs. 48-50.

46069. Lophospira trochonemoides Ulrich. Holotype. Stones River (Ord.). Murfreesboro, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 990, pl. 65, figs. 41-44.

45930 Lophospira tropidophora (Meek). Plesiotypes. to Lorraine (Ord.). Newport, Kentucky.

Richmond (Ord.). Hanover, Ohio; Madison, Indiana.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 978, pl. 72, figs. 36-39.

13951. Loxonema approximatum Walcott. Holotype.
Middle Devonian. Atrypa Peak, Eureka District, Nevada
Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 191, pl. 6, figs.

14410. Loxonema bella Walcott. Holotyp. Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 258, pl. 24, figs. 1, 1a.

344. Lucina occidentalis ventricosa (Meek and Hayden).

Holotype and paratype.

Fort Pierre or Fox Hills (Cret.). Yellowstone River, near Miles City, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 135, pl. 17, figs. 3a, 3b.

23056. Lucina ovalis Stanton. Holotype and paratype.

Knoxville (Lower Cret.). Three miles northwest of Paskenta, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 59, pl. 12, fig. 1.

107101. Lucina pauperata Guppy. Holotype. Oligocene. Vendryes, Jamaica, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 326, pl. 30, fig. 3.

107392. Lucina plesiolopha Dall. Holotype. Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, pl. 40, figs. 2, 5.

= Phacoides (Lucinisca) plesiolophus.

8362. Lucina profunda White. Cotypes. Montana (Cret.). Monument Creek, Colorado.

White, Proc. U. S. Nat. Mus., III, 1880, p. 158; IV, 1881, p. 138, pl. figs. 5, 6.

135858. Lucina santarosana Dall. Holotype.
Upper Oligocene. Oak Grove, Santa Rosa County,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1354, pl. 51, fig. 6.

8644. Lucina subundata Hall and Meek. Plesiotypes. Colorado (Cret.). Southeast of Paria, Utah.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 184, pl. 18, fig. 12a.

345. Lucina subundata Hall and Meek. Plesiotypes.
Fort Pierre (Cret.). Mouth of Sage Creek, on Cheyenne
River, South Dakota.

Meek, Rept. U S. Geol. Surv. Terr., IX, 1876, p. 133, pl. 17, figs. 2, 2a-e.

22879. Lucina subundata Hall and Meek. Plesiotypes. Colorado (Cret.). Upper Kanab Valley, Utah.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 97, pl. 22, figs. 5-6.

12252. Lucina (Diplodonta?) subundata Hall and Meek.

Plesiotypes.

Fort Pierre (Cret.). Cheyenne River, near Rapid Creek. Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 411, pl. 11, figs. 17, 18.

107103. Lucina textilis Guppy. Holotype. Oligocene. Vendryes, Jamaica, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 326, pl. 30, fig. 1.

21728. Lucina? townsendi White. Holotype.

Lower Cretaceous. Islands of St. Paul and St. Peter,

Straits of Magellan, South America.

White, Proc. U. S. Nat. Mus., XIII, 1890, p. 14, pl. 3, figs. 1, 2.

108971. Lucina turneri Stanton.

Cotypes.

Lower Tejon (Eocene). One mile southeast of Lower Lake, Lake County, California.

Stanton, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. I, 1897, p. 1042, pl. 65, figs. 6, 7.

12260. Lucina ventricosa Hall and Meek. Plesiotypes.
Fort Pierre (Cret.). Cheyenne River, near Rapid Creek,
Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 410, pl. 11, figs. 14-16.

264. Lunatia concinna (Hall and Meek). Plesiotypes. Fox Hills (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 314, pl. 32, figs. 11a-c.

See Natica moreauensis.

12250. Lunatia concinna (Hall and Meek). Plesiotypes.
Fort Pierre (Cret.). Cheyenne River, near Rapid Creek,
Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 430, pl. 12, fig. 13.

22911. Lunatia concinna (Hall and Meek). Plesiotypes. Colorado (Cret.). Upper Kanab Valley, Utah.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 134, pl. 29, figs. 9, 10.

157833. Lunatia hornii Gabb.

Plesiotype.

Lower Tejon (Eocene). One mile southeast of Lower Lake, Lake County, California.

Stanton, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. I, 1897, p. 1044, pl. 66, fig. 4.

 Lunatia occidentalis (Meek and Hayden). Holotype and paratypes.

Fox Hills (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 315, pl. 3 figs. 12a-c.

See Natica occidentalis.

265. Lunatia subcrassa (Meek and Hayden). Holotype and paratype.

Fox Hills (Cret.). Mouth of Judith River, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 316, pl. 39, fig. 3a-c.

See Natica subcrassa.

13322. Lutraria transmontana Conrad.

Holotype.

Miocene. Ranch Triumpho, Los Angeles, California.

Conrad, Rept. Expl. and Surveys R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 194, pl. 5, fig. 6.

1848. Lutraria? traskei Conrad.

Holotype.

Miocene. Carmello, California.

Conrad, Rept. Expl. and Surveys R. R. Miss. Riv. to Pacific Ocean, V, 1856, p. 324, pl. 3, fig. 23.

163603. Lyonsia acuta Dall.

Holotype.

Pliocene. Shell Creek, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1514, pl. 57, fig. 24.

1023. Lyonsia (Penopæa) concava Meek and Hayden. Cotypes. Upper Carboniferous. Region of Nemaha, Nebraska.

Meek and Hayden, Trans. Albany Inst., IV, 1858, p. 82.

= Sedgwickia? concava.

8181. Lyosoma powelli White.

Cotypes.

Jurassic. Thistle Creek, Spanish Fork Canyon, Utah.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 153, pl. 38, figs. 6a-d.

86941. Lyria costata (Sowerby).

Plesiotypes.

111846. Upper Eocene. Red Bluff, Mississippi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 85, pl. 6, fig. 2.

112109. Lyria pulchella (Sowerby).

Plesiotype.

Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 84, pl. 4, fig. 3.

46214. Lyrodesma acuminatum Ulrich.

Cotypes.

46215. Black River (Ord.). Thirteen miles south and six miles south of Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II. 1894, p. 609, pl. 42, figs. 1, 2, 5.

46216. Lyrodesma acuminatum intermedium Ulrich.

46217.

Cotypes.

Black River (Ord.). Six miles south of Cannon Falls, Minnesota.

Trenton (Ord.). Burgin, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 609, pl. 42, figs. 3, 4; p. 611, fig. 45h.

46218. Lyrodesma cannonense Ulrich. Cotypes.
46219. Trenton (Ord.). Near Cannon Falls and St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 610, pl. 42, figs. 6–8.

46220. Lyrodesma conradi Ulrich. Holotype.
Utica (Ord.). Covington, Kentucky.
Ulrich, Geol. Surv. Ohio, VII, 1893, p. 684, pl. 47, fig. 9.

46221. Lyrodesma grande Ulrich. Holotype.
Lorraine (Ord.). Cincinnati, Ohio.
Ulrich, Geol. Surv. Ohio, VII, 1893, p. 683, pl. 50, fig. 13.

46222. Lyrodesma inornatum Ulrich. Cotypes. Lorraine (Ord.). Covington, Kentucky.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 682, pl. 50, figs. 10-12.

46224. Lyrodesma major (Ulrich). Plesiotypes.
Richmond (Ord.). Clarksville, Ohio.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 611, figs. 45 a-g.

See Clidophorus major.

46225. Lyrodesma subplanum Ulrich. Holotype.
Utica (Ord.), Covington, Kentucky.
Ulrich, Geol. Surv. Ohio, VII, 1893, p. 683, pl. 47, fig. 8.

44082. Lyropora divergens Ulrich. Cotypes.
44083. Chester (Miss.). Chester, Illinois, and Sloans Valley,
Kentucky.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 584, pl. 58, figs. 4b, 4d.

43334. Lyropora ovalis Ulrich. Holotype. Chester (Miss.). Litchfield, Kentucky.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 585, pl. 58, figs. 5-5b; pl. 55, fig. 8.

43773. Lyropora quincuncialis Hall. Figured sections of plesiotypes.

Chester (Miss.). Sloans Valley, Kentucky.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 583, pl. 55, figs. 7-7c.

44086. Lyropora ranosculum Ulrich. Cotypes. Chester (Miss.). Sloans Valley, Kentucky.
Ulrich, Geol. Surv. Ill., VIII, 1890, p. 581, pl. 58, figs. 1-1c.

43771. Lyropora subquadrans Hall. Cot:
43772. Chester (Miss.). Chester, Illinois, and Sloans Vi
Kentucky.
Ulrich, Geol. Surv. Ill., VIII, 1890, p. 582, pl. 58, figs. 2, 2b, 2d

20115. Lysis oppansus White.

Chico (Cret.). Near Pence's Ranch, Butte County,
California.

White Bull. No. 51, U. S. Geol. Surv., 1889, p. 17, pl. 4, figs. 14, 15.

23085. Lytoceras batesi (Trask). Plesiotype.
23086. Knoxville (Lower Cret.). Three and six miles north of
Paskenta, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895, (Feb., 1896), p. 75, pl. 13, figs. 9-11.

17338. Maclurea annulata Walcott. Cotype.
17339. Upper Pogonip (Ord.). White Mountain, Eureka District. Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 81, pl. 11, figs. 19, 19a.

45933. Maclurea bigsbyi Hall. Plesiotype. Stones River (Ord.). Dixon, Illinois.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1039, pl. 75, fig. 10.

45934. Maclurea bigsbyi dixonensis Ulrich. Holotype. Stones River (Ord.). Dixon, Illinois.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1039.

17342. Maclurea carinata Walcott. Cotypes.
Upper Pogonip (Ord.). Lone Mountain, near Eureka,
Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 82, pl. 11, figs. 20, 20a.

45935. Maclurea crassa Ulrich and Scofield. Cotype.
Trenton (Ord.). Wykoff, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1040, pl. 75, fig. 14.

45936. Maclurea crassa macra Ulrich and Scofield. Holotype. Trenton (Ord.). Hader, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1040, pl. 75, figs. 15, 16.

45937. Maclurea depressa Ulrich and Scofield. Cotype. Stones River (Ord.). Minneapolis, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1040, pl. 75, fig. 1.

45938. Maclurea knoxvillensis Ulrich. Cotype. Trenton? (Ord.). Knoxville, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1039.

17352. Maclurea minima Hall and Whitfield. Cotypes. Pogonip (Ord.). Ute Peak, Wasatch Range, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 235, pl. 1, figs. 17-19.

17346. Maclurea subannulata Walcott. Cotypes.
Upper Pogonip (Ord.). White Mountain, Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 82, pl. 11, figs. 18-18b.

45939. Maclurina cuneata (Whitfield). Plesiotype. Trenton (Ord.). Olmsted County, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept. III, Pt. II, 1897, p. 1042, pl. 82, fig. 46.

45940. Maclurina manitobensis (Whiteaves). Plesiotypes. Trenton (Ord.). Olmsted County, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1041, pl. 82, fig. 45.

45941. **Maclurina subrotunda** (Whitfield). Plesiotype. Trenton (Ord.). Stewartsville, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1043.

114860. **Macoma alumensis** Dall. Holotype. Oligocene. Alum Bluff, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1049, pl. 47, fig. 8.

1 14669. Macoma? calhounensis Dall. Holotype.
 Oligocene. Near Baileys Ferry, Chipola River, Florida.
 Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1046, pl. 47, fig. 10.

144475. Macoma conradi Dall. Holotype.
Miocene. Temple Place, York River, Virginia.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1048,

pl. 47, fig. 3.

Macoma (Psammacoma?) holmesii Dall. Holotype.
Miocene. Natural Well, Duplin County, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1054, pl. 47, fig. 4.

157906. Macoma irma Dall.

Oligocene. Ballast Point, Tampa Bay, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1047, pl. 46, fig. 15.

147690. Macoma kelseyi Dall. Holotj Pleistocene. City Park, San Diego, California.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1
p. 1052, pl. 49, fig. 7. 157916. Macoma laxa Dall. Holotype.

Pliocene. Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1050, pl. 47, fig. 10.

107331. Macoma lyelli Dall. Cotypes.

108795. Miocene. Gay Head, Marthas Vineyard, Massachusetts.

Dall, Amer. Journ. Sci. (3), XLVIII, 1894, p. 298; Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1049, pl. 37, figs. 9-11.

135708. Macoma (Psammacoma) olivella Dall. Holotype. Oligocene. Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1054, pl. 47, fig. 20.

6086. Macoma (Psammacoma) tageliformis Dall. Cotypes.
Pleistocene. Corpus Christi, Texas.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1055.

135702. Macoma (Psammacoma) tracta Dall. Holotype.
Oligocene. Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1053, pl. 47, fig. 13.

135695. Macoma (Cymatoica) vendryesi Dall. Holotype.
Oligocene. Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1056, pl. 46, fig. 3.

114631. Macrocallista acuminata Dall. Holotype. Chipola (Oligocene). Alum Bluff, Chattahoochee River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1255, pl. 57, fig. 3.

164889. Macrocallista (Chionella?) gilberti Dall. Holotype. Eocene. Chichagof Cove, Alaska.

Dall, Harriman Alaska Exped., IV., 1904, p. 107, pl. 9, fig. 10.

107396. Macrocallista pittsburgensis (Dall). Cotypes. Tejon (Eocene). Pittsburg, Oregon.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1253.

See Meretrix (Callista) pittsburgensis.

8477. Macrocheilus anguliferus White. Cotypes.
Upper Carboniferous. Camp Cottonwood, Spring Mountain Range, Nevada.

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 1874,
p. 22; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I. 1877,
p. 160, pl. 12, figs. 3a-3c, 3e, 3f.

6593. Macrocheilus intercalaris pulchellus Meek and Worthen.
Plesiotype.

Upper Carboniferous. Two and one-half miles southwest of Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Nebraska (Hayden), 1872, p. 228, pl. 6, fig. 8.

=Sphærodoma intercalaris.

1974. Macrocyclis spatiosa (Meek and Hayden). Holotype. Wind River (Eocene). Wind River Valley, Wyoming.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 594, pl. 42, figs. 9a-c.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 452, pl. 30, figs. 1-3.

See Helix spatiosa.

14381. Macrodon hamiltonæ Hall. Plesiotypes. Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 243, pl. 23, figs. 5-50.

7588. Macrodon obsoletus Meek. Cotypes.
Upper Carboniferous. Monongalia County, West Virginia.

Meek, Third Rept. Regents West Virginia University, 1870-71, p. 71.

6522. **Macrodon tenuistriata** Meek and Worthen. Plesiotypes. Upper Carboniferous. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Nebraska (Hayden), 1872, p. 207, pl. 10, figs. 20a-20b.

14382. Macrodon truncatus Walcott.

Cotype.

Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 243, pl. 8, fig. 2.

114430. Macromphalia (Gyrodisca) duplinensis (Dall). Holotype.

Miocene. Magnolia, Duplin County, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 60, fig. 4.

See Gyrodes (Gyrodisca) duplinensis and Gyrodisca duplinensis.

41848. Macronotella scofieldi Ulrich. Cotypes.

41849. Stones River (Ord.). High Bridge, Kentucky; Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 684, pl. 43, figs. 30-34.

153773. Mactra albirupina Harris. Coty

Eocene. White Bluff, Arkansas River, Arkansas.

Harris, Ann. Rept. Geol. Surv. Arkansas, 1894, Pt. II, p. pl. 6, fig. 2.

- 192. Mactra alta Meek and Hayden. Holotype and paratype. Fox Hills (Cret.). Bad Lands of Judith River, Montana.

  Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 271.
- 192. Mactra (Cymbophora) alta (Meek and Hayden).
- Holotype and paratype. Fox Hills (Cret.). Mouth of Judith River, Montana.

  Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 210, pl. 37, figs. 2a, 2b.
- 7853. Mactra (Trigonella) arenaria Meek. Cotypes.

  Montana (Cret.). Red Creek, Uinta Mountains, Utah.

  Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 154, pl. 14, fig. 5.
- 7844. Mactra? canonensis Meek.

  Fort Pierre (Cret.). Canyon City, Colorado.

  Meek, Fourth Ann. Rept. U. S. Geol. Surv. Terr., 1871, p. 308.—

  White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879,
- 114650. Mactra chipolana Dall. Holotype.
  Oligocene. Calhoun County, Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 892.
  pl. 27, fig. 19.

p. 297, pl. 9, figs. 11a-c.

- 107615. Mactra (Mactrotoma) cymata Dall. Holotype.
  Oligocene. Oak Grove, Santa Rosa County, Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898.
  p. 893, pl. 33, fig. 23.
- Eocene. Vamos-Vamos Station, Panama Canal, Darien.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 895.
- 12525. Mactra? emmonsi Meek. Cotypes.
  Colorado (Cret.). Fast Canyon Creek, Wasatch Range.
  Utah.
  - Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 153, pl. 15, fig. 8.
- 22902. Mactra emmonsi Meek. Plesiotypes.
  22903. Colorado (Cret.). Huerfano Park, Colorado, and Coalville.
  Utah.
  Stanton, Bull. No. 106, U. S. Geol. Surv., 1893. p. 121, pl. 27.

figs. 9-13.

- 177. Mactra (Cymbophora?) formosa (Meek and Hayden).

  Cotypes.

  Fox Hills (Cret.) Mouth of Indith River. Montana
  - Fox Hills (Cret.). Mouth of Judith River. Montana.

    Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 207, pl. 39, fig. 7.
- 177. Mactra formosa Meek and Hayden. Cotypes. Fox Hills (Cret.). Near mouth of Judith River. Montana.

  Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 271.

13310. Mactra? gaviotensis Conrad. Holotype.

Miocene. Gaviote Pass, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 194, pl. 7, fig. 4.

297. Mactra gracilis Meek and Hayden. Holotype and paratypes.
Montana (Cret.). Yellowstone River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1860, p. 179.

297. Mactra (Cymbophora?) gracilis (Meek and Hayden).

Holotype and paratypes.

Montana (Cret.). Yellowstone River, near Miles City, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 209, pl. 17, figs. 18a, 18b.

7840. **Mactra? holmesi** (Meek). Holotype, paratypes, and 8088. plesiotypes.

Fox Hills (Cret.). About four miles north of Golden City, and near Canyon City, Colorado.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879, p. 295, pl. 6, figs. 5a, 5b, 4a, 4b.

See Cyrena holmesi.

22904. Mactra huerfanensis Stanton. Cotypes. Colorado (Cret.). Huerfano Park, Colorado.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 122, pl. 27, figs. 14, 15.

8636. Mactra? incompta White. Holotype. Colorado (Cret.). Five miles above Pueblo, Colorado.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876,

p. 185, pl. 17, figs. 6a, b.

1913. Mactra (Cymbophora?) nitidula (Meek and Hayden).
Holotype and paratype.

Fox Hills (Cret.). Deer Creek, near North Platte, Wyoming.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 211, pl. 30, figs. 6a-c.

See Tellina nitidula.

207. Mactra siouxensis Meek and Hayden. Cotypes and plastotypes.

Dakota (Cret.). Big Sioux River, two miles above its mouth, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1861, p. --
Mactra (Cymbophora?) siouxensis.

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Mactra (Cymbophora?) siouxensis (Meek and Hayden).
Cotypes and plastotypes.

Dakota (Cret.). Big Sioux River, two miles above its mouth, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 206, pl. 1, figs. 7b, 7c.

See Mactra siouxensis.

9855. Mactra texana Conrad.

Cotypes.

hovene? Prairie between Laredo and Rio Grande City. Texas.

Coursel, Rept. U. S. Mexican Bound, Surv., Emory. 1, Pt. II, 1857.
p. 148. pl. 4, figs. 14, 1b.

153742. Mactra (Mactrotoma) undula Dall. Holotype. Physene. Near Parlington Court House, South Carolina.

Pall, Franc. Wagner Free Inst. Sci. Phila., III. Pt. IV. 1596, p. Ngt. pl. N. 6g. 12.

Mactra Cymbophora? utahensis Meek. Cotypes 12441 Chibrach Cret. East Canyon Creek. Wahsanch Range. and near Chubrille. Utah.

Mord, Rope, I'' S. Good. Expl. arth. Pro., IV. Ph. L. 1997, p. 155 pt. 35 April 4-2h - Station. Rell. No. 20th. I''. S. Good. Surv. 1866, p. 120, pt. 27, April 20, 17.

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158272. Madracis gregorioi Vaughan. Cotypes. Chickasawan (Eocene). Greggs Landing, Alabama.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 130, pl. 13, figs. 12, 12a.

3585. Mæonia axinia Dana. Cotypes. Carboniferous. District of Illawarra, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 696, Atlas, pl. 5, figs. 5a-d.

25640. Mæonia? carinata (Morris). Plesiotype.
Carboniferous. Wollongong Point, Illawarra, New South
Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 696, Atlas, pl. 6, figs. 1a, 1b.

3583. Mæonia (Pyramia) elliptica Dana. Cotypes.
3583a. Carboniferous. Harpers Hill on the Hunter, and Wollongong Point, Illawarra, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 697, Atlas, pl. 6, figs. 5a-c, 6, 6a.

3584. Mæonia elongata Dana. Holotype.
Carboniferous. Black Head, Illawarra, New South Wales,
Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 695, Atlas, pl. 5, figs. 3a-c.

4639. Mæonia fragilis Dana. Holotype.
Carboniferous. Glendon on the Hunter, New South Wales,
Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 696, Atlas, pl. 6, fig. 3.

25639. **Mæonia (Cleobis) gigas (McCoy).** Plesiotypes. Carboniferous. District of Illawarra, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 697.

3637. **Mæ**onia (Cleobis) gracilis Dana. Cotypes. Carboniferous. Wollongong Point, Illawarra, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 698, Atlas, pl. 7, figs. 1a-c.

3638. Mæonia (Cleobis) grandis Dana. Cotypes.
Carboniferous. Wollongong Point, Illawarra, New South
Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 697, Atlas, figs. 7, 7a, 8, 8a,

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	Ambibi Mem Calif Amai Sm. III. 1905. p. 211. pt.	÷i
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reasus. Mangilia Taranis strongi Armold. E: Plestocene. Denimm Island, if San Pedro, Calif. Armobil Mem. Calif Acad Sch. III. 1815, p. 215, ph. 9, 3 7903. Margarita mudgeana (Meek). Holotype.

Mentor (Cret.). Twelve miles southwest of Salina,

Kansas.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 300, pl. 2, fig. 9b. See Turbo mudgeanus.

294. Margarita nebrascensis (Meek and Hayden). Holotype 415. and paratypes.

Montana (Cret.). Yellowstone River, near Miles City, Montana, and Long Lake, North Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 298, pl. 19, figs. 8a, 8b, 9a, 9b.

See Turbo nebrascensis.

162539. Margarita optabilis knechti Arnold. Holotype. Pleistocene. San Pedro, California.

Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 332, pl. 5, fig. 14.

162540. **Margarita optabilis nodosa** Arnold. Holotype. Pleistocene. San Pedro, California.

Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 332, pl. 5, fig. 13.

162538. Margarita parcipicta pedroana Arnold. Holotype. Pleistocene. San Pedro, California.

Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 333, pl. 5, fig. 16.

112573. Margarita tampaënsis Dall. Holotype. Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 406, pl. 18, fig. 5.

7719. Margaritana nebrascensis Meek and Hayden. Holotype and paratype.

Dakota (Cret.). Opposite Sioux City, on Missouri River in Nebraska.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 114, pl. 1, figs. 5a-c.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 427, pl. 4, figs. 1, 2.

See Unio (Baphia?) nebrascensis.

286. Margaritella flexistriata (Evans and Shumard). Plesiotypes. Fort Pierre (Cret.). Cheyenne River, near mouth of Sage Creek, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 302, pl. 19, figs. 11, 11a-d.

164899. Margarites peninsularis Dall. Holotur Eocene. Chicagof Cove, Alaska.

Dall, Harriman Alaska Exped., IV, 1904, p. 110, pl. 9, fig. 6

97377. Marginella (Volutella) amiantula Dall. Holotype.
Pliocene. Near Fort Thompson, Caloosahatchie River,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 56, pl. 5, fig. 9.

113773. Marginella amina Dall. Holotype.
Oligocene. Potrero, Rio Amina, Santo Domingo, West
Indies.

Dall, Proc. U. S. Nat. Mus., XIX, 1896, p. 309, pl. 29, fig. 15.

97362. Marginella (apicina var.?) pardalis Dall. Holotype.
Pliocene. Near Fort Thompson, Caloosahatchie River,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 49, pl. 5, fig. 2.

Upper Oligocene. Pointapier, Trinidad, West Indies.

Guppy, Proc. II. S. Nat. Mus., XIX, 1896, p. 308, pl. 29, fig. 13.

97498. Marginella aurora Dall. Holotype.
Miocene. Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 51, pl. 6, fig. 4a.

112096. Marginella ballista Dall. Holotype. Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 47, pl. 4, fig. 6.

112097. Marginella (ballista var.?) tampæ Dall. Cotypes. Oligocene. Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 47.

97371. Marginella bella (Conrad). Cotypes.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 53, pl. 4, fig. 9a.

112100. Marginella bella bellula Dall. Cotypes. Oligocene. Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 53, pl. 4, fig. 8e.

Oligocene. Tampa, Florida. Cotypes.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 53, pl. 4, fig. 8d.

112319. Marginella (Volutella) dacria Dall. Holotype. Pliocene. Tillys Lake, Waccamaw River, South Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 226, pl. 14, fig. 5.

97369. Marginella denticulata Conrad. Plesiotype. Pliocene. Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 51, pl. 5, fig. 8.

113683. Marginella domingoensis Dall. Cotypes.

Oligocene. Island in Lake Henriquillo, Santo Domingo, West Indies.

Dall, Proc. U. S. Nat. Mus., XIX, 1896, p. 310.

112104. Marginella elegantula Dall. Holotype. Oligocene. Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 54, pl. 4, fig. 7.

113200. Marginella eulima Dall. Holotype. Pliocene. Shell Creek, De Soto County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 225, pl. 13, fig. 10.

112103. Marginella faunula Dall. Cotypes. Oligocene. Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 53, pl. 4, fig. 9b.

97363. Marginella floridana Dall. Holotype.
Pliocene Near Fort Thompson, Caloosahatchie River,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 49, pl. 5, fig. 6.

97375. Marginella gravida Dall. Holotype.
Pliocene. Near Fort Thompson, Caloosahatchie River,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 55, pl. 5, fig. 3.

113740. Marginella latissima Dall. Holotype.
Pliocene. Moen, Costa Rica.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 308, pl. 29, fig. 11.

107076. Marginella limonensis Dall. Holotype.
Pliocene. Limon, Costa Rica, Central America.
Dall, Proc. U. S. Nat. Mus., XIX, 1896, p. 309, pl. 29, fig. 12.

112105. Marginella newmani Dall. Holotype. Oligocene. Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 54, pl. 4, fig. 8.

113201. Marginella onchidella Dall. Holotype. Pliocene. Shell Creek, De Soto County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 226, pl. 13, fig. 7.

97360. Marginella precursor Dall. Holotype. Pliocene. Near Fort Thompson, Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 47, pl. 5, fig. 4.

107139. Marginella solitaria Guppy. Holotype. Upper Oligocene. Pointapier, Trinidad, West Indies. Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 308, pl. 29, fig. 14.

97374. Marginella styria Dall. Holotype. Pliocene. Near Fort Thompson, Caloosahatchie River, Florida.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 54, pl. 5, fig. 1.

97367. Marginella willcoxiana Dall. Holotype. Pliocene. Shell Creek, De Soto County, Florida.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 50, pl. 5, fig. 7.

35328. Marginifera haydenensis Girty. Holotype and paratypes. Upper Carboniferous. Near Grand River, Colorado.

> Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 380, pl. 5, figs. 9-9c, 10-10b, 11-11a.

35329. Marginifera ingrata Girty. Cotypes. Weber (Upper Carb.). Little Ella Hill and Horseshoe 35330. Gulch, Leadville district, Colorado.

> Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 379, pl. 5, figs. 12, 12a, 13, 13b.

35323. Marginifera lasallensis Worthen? Plesiotype. Weber (Upper Carb.). Gulch, Crested Butte quadrangle, Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 372, pl. 5, figs.

35324. Marginifera muricata Norwood and Pratten. Plesiotypes. Maroon (Upper Carb.). Cement Creek, Crested Butte 35326.

quadrangle; Rock Creek, and southeast of Italian 35327. Peak, Elk Mountain Region, Colorado.

> Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 373, pl. 5, figs. 5, 5b, 6, 6b, 7.

35325. Marginifera wabashensis Norwood and Pratten var.

Plesiotype.

Hermosa (Upper Carb.). Silver Creek, San Juan Region, Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 375, pl. 5, figs. 8, 8a.

40893. Mariacrinus carleyi (Hall). Plesiotype.

Waldron (Sil.). Waldron, Indiana.

Wachsmuth and Springer, N. A. Crinoidea Camerata, Mem. Mus. Comp. Zoöl., XXI, 1897, p. 282, pl. 22, figs. 2a-c.

455. Martesia cuneata (Meek and Hayden). Holotype. Fox Hills (Cret.). Long Lake, North Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 259, pl. 30, figs. 8a, 8b.

See Pholas cuneata.

145869. Martesia? ovalis Dall.

Holotype.

Miocene. Plum Point, Maryland.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 820, pl. 36, fig. 5.

35186. Martinia rostrata Girty. Cotypes. Madison (Miss.). Yellowstone National Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 553, pl. 70, figs. 5a-f.

46226. Matheria rugosa Ulrich. Holotype.

Black River (Ord.). Six miles south of Cannon Falls,

Minnesota.

Ulrich, Nineteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn., 1892, p. 241, fig. 26; Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 563, pl. 36, figs. 29, 30.

115436. Mathilda plexita Dall.

Holotype.

Oligocene. Jamaica, West Indies.

Dall, Proc. U. S. Nat. Mus., XIX, 1896, p. 320, pl. 29, fig. 5.

24598. Matthevia variabilis Walcott. Cotypes.
Upper Cambrian. One mile northwest of Saratoga Springs,
New York.

Walcott, Amer. Journ. Sci. (3), XXX, 1885, p. 18, figs. 1-6, on p. 20.

114547. Mazzalina costata Dall.

Cotypes.

135102. Oligocene. Near Baileys Ferry, Chipola River, and White Beach, Little Saratosa Bay, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 106.

135131. Mazzalina dalli Harris.

Holotype.

Eocene. Vinces Bluff, Saline River, Arkansas.

Harris, Ann. Rept. Geol. Surv. Arkansas, 1894, Pt. II, p. 166, pl. 7, fig. 7.

135154. Mazzalina inaurata (Conrad).
Claibornian (Eocene). Claiborne, Alabama.

Plesiotype.

Harris, Ann. Rept. Geol. Surv. Arkansas, 1894, Pt. II, p. 164, pl. 7, fig. 6.

135130. Mazzalina inaurata humerosa Harris. Holotype. Eocene. Well at Rison, Arkansas.

Harris, Ann. Rept. Geol. Surv. Arkansas, 1894, Pt. II, p. 165, pl. 7, fig. 4.

135129. Mazzalina inaurata oweni (Dall). Plesiotype. Eocene. White Bluff, Arkansas River, Arkansas.

Harris, Ann. Rept. Geol. Surv. Arkansas, 1894, Pt. II, p. 165, pl. 7, fig. 1.

135103. Mazzalina oweni Dall. Cotypes.
Middle Eocene. White Bluff, Jefferson County, Arkansas.

Owen, Second Geol. Rept. Arkansas, 1860, p. 35, pl. 9, fig. 1 (as Fusus sp.).—Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 105; ibid., Pt. II, 1892, p. 233.

21714. Medlicottia copei White. Cotype.

Permian. Military crossing of the Big Wichita, Baylor
County, Texas.

White, Amer. Nat., XXIII, 1889, p. 117, pl. 1, figs. 1-3; Bull. No. 77, U. S. Geol. Surv., 1891, p. 19, pl. 2, figs. 1-3.—Smith, Mon. XLII, U. S. Geol. Surv., 1903, p. 48, pl. 22, figs. 1-3.

14929. Medusina costata (Torell). Plesiotype.

23891. Lower Cambrian. Lugnas, Sweden.

Walcott, Mon. XXX, U. S. Geol. Surv., 1898, p. 49, pl. 28, figs. 3-3b, 4; pl. 29, fig. 2.

See Medusites lindströmi.

26099. Medusina deperdita Beyrich. Plastotype.

Jurassic. Eichstätt, Germany.

Walcott, Mon. XXX, U. S. Geol. Surv., 1898, p. 91, pl. 44, fig. 1.

26307. **Medusina radiata** (Linnarsson). Plastotype. Middle Cambrian. Bohemia.

Walcott, Mon. XXX, U. S. Geol. Surv., 1898, p. 58, fig. 16.

14929. **Medusites lindströmi** Walcott. Cotype. Lower Cambrian. Lugnas, Sweden.

Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, pl. 56, fig. 1. = Medusina costata.

6546. Meekella striato-costata (Cox). Plesiotypes.
Upper Carboniferous. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Nebraska (Hayden), 1872,

p. 175, pl. 5, figs. 12a-c.

9218. Meekella striatocostata (Cox). Plesiotypes. Upper Carboniferous. Southern Jowa.

White, Rept. U. S. Geogr. Surv., W. 100th Merid., IV, Pt. I, 1876, p. 126, pl. 9, figs. 4a-4e.

8185. Meekoceras aplanatum White. Cotypes.

Triassic. Fifteen miles southeast of John Grays Lake,
southeastern Idaho.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 112, pl. 31, figs. 1a-d.

8182. Meekoceras gracilitatis White. Cotypes.

Triassic. Five miles west of John Grays Lake, southeastern Idaho.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 115, pl. 31, figs. 2a-d.

8186. Meekoceras mushbachianum White. Cotypes.

Triassic. Five miles west of John Grays Lake, southeastern Idaho.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 114, pl. 32, figs. 1a-d.

43281. Meekopora? aperta Ulrich. Cotypes and figured sections. Keokuk (Miss.). Kings Mountain, Kentucky.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 485, pl. 76, figs. 1, 1a.

43282. Meekopora clausa (Ulrich). Plesiotypes.

43283. Chester (Miss.). Sloans Valley and Grayson County, Kentucky.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 485, pl. 76, fig. 6, pl. 77, figs. 7-7a.

See Fistulipora? clausa.

43285. Meekopora eximia Ulrich. Cotypes and figured sections.

Upper St. Louis or Chester (Miss.). Monroe County,

Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 483, pl. 77, figs. 6c, 6d.

45942. Meekospira subconica Ulrich and Scofield. Holotype. Richmond (Ord.). Near Spring Valley, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept. III, Pt. II, 1897, p. 1080, pl. 81, figs. 40, 41.

8562. Megalaspis belemnurus White. Holotype.
Upper Pogonip (Ord.). Queen Spring Hill, Schell Creek
Range, Nevada.

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 1874, p. 11; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1877, p. 59, pl. 3, fig. 9.

34123. Megambonia lata Hall. Plesiotype. Helderbergian (Lower Dev.). Atoka quadrangle, Indian Territory.

Girty, Nineteenth Ann. Rept. U. S. Geol. Surv., 1900, p. 569, pl. 70, figs. 5a, 5b.

13897. Megambonia occidualis Walcott. Cotype.
Middle Devonian. Lone Mountain, near Eureka, Nevada.
Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 173, pl. 5, fig. 1.

38145. Megathentomum pustulatum Scudder. Holoty
Upper Coal Measures. Mazon Creek, Grundy Com
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1885, p. 346, pl. 3-, figs. 9, 10; Foss. Insects N. America, I, 1890, p. 310, pl. 18, figs. 9, 10.

36017. **Megistocrinus abnormis** (Lyon). Plesiotype. Hamilton (Dev.). Louisville, Kentucky.

Wood, Smithsonian Misc. Coll., Quart., XLVII, p. 63, pl. 15, fig. 3.

- 36014. Megistocrinus expansus Miller and Gurley. Plesiotype. Traverse (Dev.). Collins Quarry, Alpena, Michigan.
  Wood, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 66.
- 36013. Megistocrinus regularis Wood. Holotype.
  Traverse (Dev.). Collins Quarry, Alpena, Michigan.
  Wood, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 59, pl.
  15, figs. 4, 4a.
- 35141. **Megistocrinus rugosus** Lyon and Casseday. Holotype. Hamilton (Dev.). Beargrass Creek, Louisville, Kentucky. Wood, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 63.
- 26397. Megistocrinus sphæralis Wood. Holotype and paratypes. 26398. Traverse (Dev.). Collins Quarry, Alpena, Michigan. Wood, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 60, text figs. 2, 3; p. 61, pl. 15, figs. 1, 1a-b.
- 26395. Megistocrinus tuberatus Wood. Holotype and paratypes.

  Traverse (Dev.). Partridge Point, south of Alpena,
  Michigan.

Wood, Smithsonian Misc. Col!., Quart., XLVII, 1904, p. 57, text fig. 1; p. 58, pl. 15, figs. 2a-ç; pl. 16, figs. 3, 3a.

83623. Meioceras cingulatum Dall. Cotypes.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 302, pl. 16, figs. 6, 7.

- 8085. Melampus antiquus Meek. Cotypes.
  Montana (Cret.). Coalville, Utah.
  Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 507.
- 8085. Melampus? antiquus Meek. Cotypes.

  Montana (Cret.). Near Coalville, Utah.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p.
23, pl. 12, figs. 11a-d; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 444, pl. 5, figs. 13-16.

22335. Melampus clarkii White. Cotypes.

Bear River (Cret.). Twenty miles north of Cokeville,

Wyoming.

White, Bull. No. 128, U. S. Geol. Surv., 1895, p. 42, pl. 5, figs. 2, 3.

500. **Melampus priscus** Meek. Holotype. Bear River (Cret.). Bear River, near mouth of Sulphur Creek, Wyoming.

Meek, Proc. Acad. Nat. Sci. Phila., for 1860, p. 315.

=Rhytophorus priscus.

A .

2149. Melania anthonyi Meek and Hayden. Holotype and paratype.

Laramie (Cret.). Yellowstone River, thirty miles above its mouth, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 124. = Hydrobia anthonyi.

696. Melania arcta Meek.

Cotypes.

Eocene. Hams Fork, northeast of Fort Bridger, Wyoming.

Meek, Proc. Acad. Nat. Sci. Phila., for 1860, p. 314.

=Goniobasis arcta.

2142. Melania convexa Meek and Hayden. Holotype and paratypes.

Laramie (Cret.). Bad Lands of Judith River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 70 and p. 125; ibid., for 1857, p. 138.

=Goniobasis convexa.

498. Melania humerosa Meek.

Cotypes.

Bear River (Cret.). Bear River, near mouth of Sulphur Creek, Wyoming.

Meek, Proc. Acad. Nat. Sci. Phila., for 1860, p. 313.

= Pyrgulifera humerosa.

8197. Melania? insculpta Meek.

Cotypes.

Laramie (Cret.). Rock Springs, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 94, pl. 20, fig. 4a.

See Goniobasis? insculpta.

12490. Melania insculpta Meek.

Plesiotypes.

Laramie (Cret.). Northeastern Colorado.

White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 460, pl. 26, figs. 4, 5.

2144. Melania invenusta Meek and Hayden. Holotype and

paratypes.

Laramie (Cret.). Mouth of Judith River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1857, p. 136.

=Goniobasis invenusta.

2137. Melania minutula Meek and Hayden. Holotype.

Laramie (Cret.). Three miles below Fort Union, North
Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 123.

= Micropyrgus minutulus.

2148. Melania multistriata Meek and Hayden. Holotype parat

Laramie (Cret.). Mouth of Yellowstone River, N Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. .

=Campeloma multistriata.

2138. Melania nebrascensis Meek and Hayden. Holotype and 2139. Holotype and paratypes.

2160. Laramie (Cret.). Fort Clark, and mouth of Yellowstone River, North Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 124.

Goniobasis nebrascensis.

685. Melania? nitidula Meek.

Bear River (Cret.). Bear River, near mouth of Sulphur

Creek, Wyoming.

Meek Proc. Acad. Nat. Sci. Phila., for 1860 p. 314.

=Limnæa nitidula.

2184. Melania omitta Meek and Hayden. Holotype.
Laramie (Cret.). Mouth of Judith River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1857, p. 136. = Goniobasis omitta.

12541. Melania? sculptilis Meek. Cotypes.
Tertiary. Kawsoh Mountains, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 195, pl. 17, fig. 8.

691. Melania simpsoni Meek.

Cotype.
Eocene. Hams Fork, northeast of Fort Bridger, Wyoming.

Meek Proc. Acad. Nat. Sci. Phila., for 1860, p. 313.

2145. Melania sublævis Meek and Hayden.

Holotype and paratype.

Laramie (Cret.). Mouth of Judith River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1857, p. 136.

=Goniobasis sublævis.

12551. Melania ? subsculptilis Meek. Cotypes. Tertiary. Kawsoh Mountains, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 196, pl. 17, fig. 9.

19180. Melania subtortuosa Meek and Hayden. Holotype and paratypes.

Laramie (Cret.). Mouth of Judith River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1857, p. 136.

= Goniobasis? subtortuosa.

2141. Melania tenuicarinata Meek and Hayden. Holotype and paratypes.

Fort Union (Cret.). Fort Union, North Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1857, p. 137.

=Goniobasis tenuicarinata.

1978. Melania (Potodoma) veterna Meek and Hayden. Cotypes.
Jurassic. Head of Wind River, Wyoming.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1861, p. 444. - Lioplacodes veternus.

2147. Melania warrenana Meek and Hayden. Holotype. Fort Union (Cret.). Square Butte, thirty miles below Fort Clark, North Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1857, p. 137. = Hydrobia warrenana.

7833. Melania (Goniobasis?) wyomingensis Meek. Cotypes. Laramie (Cret.). Black Buttes Station, Wyoming.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 516.

9018. **Melania wyomingensis** Meek. Plesiotypes. 12491. Laramie (Cret.). Crow Creek, Northern Colorado.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883 p. 95, pl. 28, figs. 6a, 6b; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 460, pl. 26, figs. 1, 2, 3.

11559. Melanopsis? americana White. Cotypes. 12495. Laramie (Cret.). Valley of South Platte, Colorado.

White, Proc. U. S. Nat. Mus., V, 1882, p. 96, pl. 4, figs. 9, 10; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 461, pl. 23, figs. 21-23.

115513. **Melanopsis capula** Guppy. Holotype. Miocene. Cumana, Venezuela.

Guppy, Quar. Journ. Geol. Soc. London, XXII, 1886, p. 580, pl. 26, fig. 14.

=Crepitacella cepula.

Oligocene. Near Baileys Ferry, Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 118, pl. 8, fig. 3.

Oligocene. Chipola, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 119.

Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890,

p. 119, pl. 8, fig. 3.

135319. Melongena subcoronata aspinosa Dall. Hole Pliocene. Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. 1
p. 120, pl. 9, fig. 6, 35158. Menophyllum (?) excavatum Girty. Cotypes.
Madison (Miss.). Crowfoot Ridge, Gallatin Range, Yellowstone National Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 511, pl. 67, figs. 1a, 1b, 1c, 1d, 1e, 1f.

35370. Menophyllum ulrichanum Girty. Cotypes.

35371. Ouray (Miss.). Cascade Creek, Engineer Mountain quadrangle, and Canyon Creek, Needle Mountain quadrangle, Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 271, pl. 1, figs. 1, 2.

1842. Meretrix californiana Conrad. Holotype.

Eocene. Canada de las Uvas, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, V, 1856, p. 320, pl. 2, fig. 4.

107396. Meretrix (Callista) pittsburgensis Dall. Cotypes. Tejon (Eocene). Pittsburg, Oregon.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, pl. 36, fig. 22; pl. 43, fig. 15.

= Macrocallista pittsburgensis.

34121. Meristella arcuata Hall. Plesiotype.
Helderbergian (Lower Dev.). Atoka quadrangle, Indian
Territory.

Girty, Nineteenth Ann. Rept. U. S. Geol. Surv., 1900, p. 564, pl. 71, figs. 2a-2c.

34120. Meristella arcuata atoka Girty. Cotypes. Helderbergian (Lower Dev.). Atoka quadrangle, Indian Territory.

Girty, Nineteenth Ann. Rept. U. S. Geol. Surv., 1900, p. 567, pl. 71, figs. 1a-1f.

13842. Meristella (Whitfieldia) nasuta (Conrad). Plesiotype. Middle Devonian. Lone Mountain, near Eureka, Nevada. Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 148, pl. 3, figs.

= Meristella nasuta.

8-8b.

7899. Mesalia? kansasensis Meek. Holotype and paratypes.

Mentor (Cret.). Twelve miles southwest of Salina,

Kansas.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 333, pl. 2, figs. 7a, 7b.

See Turritella kansasensis.

20116. Mesalia obsuta White. Cotypes. Chico (Cret.). Near Pences Ranch, Butte County, California.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 20, pl. 4, figs. 6, 7.

147040. Mesalia pleboides Vaughan. Cotypes.
Claibornian (Eocene). Hammetts Branch, near Mount
Lebanon, Louisiana.

Vaughan, Bull. No. 142, U. S. Geol. Surv., 1897, p. 36, pl. 3, figs. 4, 5, 6.

164877. Mesodesma alaskensis Dall. Holotype. Eocene. Chichagof Cove and West Cove, Alaska.

Dall, Harriman Alaska Exped., IV, 1904, p. 108, pl. 9, fig. 1.

12509. Mesodesma bishopi White. Cotypes. Eocene. Bijou Basin, forty miles east of Denver, Colorado. White, Powell's Rept. Geol. Uinta Mountains, 1876, p. 128.
. [The locality given is erroneous, and the true locality is unknown. See Eleventh Ann. Rept. U. S. Geol. Surv. Terr., pp. 191, 192.—T. W. STANTON.]

158324. Mesomorpha duncani Vaughan. Cotypes.
Midway (Eocene). Prairie Creek, Alabama.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 159, pl. 18, figs. 8-10.

15399. Mesonacis vermontana (Hall). Plastotypes.
Lower Cambrian. Parker's quarry, Georgia, Vermont.

Walcott, Amer. Journ. Sci. (3), XXIX, 1885, p. 329, text figs. 1, 2;
Bull. No. 30, U. S. Geol. Surv., 1886, p. 158, pl. 24, figs. 1-1b.

See Olenellus (Mesonacis) vermontana.

- 22915. Mesostoma occidentalis Stanton. Cotypes. Colorado (Cret.). Malachite, Huerfano Park., Colorado. Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 139, pl. 30, figs. 7, 8.
- 43182. Mesotrypa angularis Ulrich and Bassler. Holotype and figured sections.

  Trenton (Ord.). Frankfort, Kentucky.

  Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 23, pl. 7, figs. 7-9.
- 43544. Mesotrypa discoidea Ulrich. Holotype and figured sections. Trenton (Ord.). Goodhue County, Minnesota.

  Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I,

1893, p. 260, fig. 16.

- 44056. **Mesotrypa echinata** Ulrich and Bassler. Holotype and figured sections.

  Trenton (Ord.). Nashville, Tennessee.

  Ulrich and Bassler, Smith. Misc. Coll., Quart., XLVII, 1904, p. 22, pl. 7, figs. 4-6.
- 43542. Mesotrypa infida Ulrich. Cotypes and figured sec\*
  43543. Black River (Ord.). Fountain and Minneapolis, M

  Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III
  1893, p. 258, pl. 17, figs. 1-8

43540. Mesotrypa quebecensis (Ami). Plesiotype and figured sections.

Trenton (Ord.). Little Falls, New York.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III. P. I. 1893, p. 248, fig. 15, e, f, p. 259.

43545. Mesotrypa (?) rotunda Ulrich. Holotype and figurd sections.

Trenton (Ord.). Hader, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt.1, 1893, p. 262, fig. 17.

43546. Mesotrypa (?) spinosa Ulrich. Cotypes and figured sections. Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minnesota, Final Rept., III. Pt. I, 1893, p. 259, pl. 17, figs. 9-12.

4.5.41. Menotrypa whiteavesi (Nicholson). Plesiotype and figured sections.

Trenton (Ord.). Ottawa, Canada.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt.I. 1893, p. 248, figs. g, h.

20407. Metengonoceras ambiguum Hyatt. Holotype. Comanche (Lower Cret.). On Beecaves road, nine miles from Austin, Texas.

Hyatt, Mon. XLIV, U. S. Geol. Surv., 1903, pp. 183, 184, pl. 26, figs. 5 7.

Cotype. Colorado (Cret.). Four miles east of Whitesboro, Texas.

Hvatt, Mon. XLIV, U. S. Geol. Surv., 1903, pp. 185-187, pl. 27, figs. 3-14.

Metengonoceras inscriptum Hyatt. Cotypes. 20405. Predericksburg (Lower Cret.). Twelve miles northwest of Decatur; Beecaves road, nine miles from Austin, Texas. Hyatt, Mon. XLIV, U. S. Geol. Surv., 1903, pp. 180–182, pl. 25,

19105. Metengonoceras inscriptum var? Hyatt. Cotype. 199406. Predericksburg (Lower Cret.). Fifteen miles west of Denison, and Cow Creek, Travis County, Texas.

figs. 7, 9; pl. 26, figs. 1-4.

Hyatt, Mon. XLIV, U. S. Geol. Surv., 1903, pp. 180-182, pl. 25, fig. 8.

114629. Metis chipolana Dall. Holotype.
Oligocene. Alum Bluff, Calhoun County, Florida.
Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p.
1042, pl. 47, fig. 21.

115061. Metis magnoliana Dall. Holotype.
Upper Miocene. Magnolia, Duplin County, North Carolina.

Dall, Trans, Wagner Free Inst. Sci. Phila., III, Pt. V. 1900, p. 1042, pl. 49, fig. 6.

115660. Metis trinitaria Dall.

Holotype.

Oligocene. Trinidad, West Indies.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1041, pl. 46, fig. 24.

- 29409. Metoicoceras kanabense Hyatt. Holotype. Colorado (Cret.). Upper Kanab Valley, Utah.

  Hyatt, Mon. XLIV, U. S. Geol. Surv., 1903, pl. 15, figs. 9-11.
- 29408. Metoicoceras whitei Hyatt. Paratype. Colorado (Cret.). Upper Kanab Valley, Utah.

  Hyatt, Mon. XLIV, U. S. Geol. Surv., 1903, pp. 122-127, pl. 13, figs. 3-5.
- 17358. Metoptoma? analoga Walcott. Holotype.
  Upper Pogonip (Ord.). Pogonip Ridge, Eureka District,
  Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 84, pl. 1, figs. 11, 11a.

- 13961. Metoptoma devonica Walcott. Holotype.

  Middle Devonian. County Peak, Eureka District, Nevada.

  Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 195, pl. 17, figs.

  2, 2a.

  =Scenella devonica.
- 23844. Metoptoma? minneiskensis Walcott. Holotype. Upper Cambrian. Minneiska, Minnesota.
  Walcott, Proc. U. S. Nat. Mus., XIII, 1890, p. 267, pl. 20, fig. 2.
- 23843. Metoptoma? peracuta Walcott. Holotype.
  Upper Cambrian. Spoffords Bluff, Wisconsin.
  Walcott, Proc. U. S. Nat. Mus. XIII, 1890, p. 267, pl. 20, fig. 1.
- 14424. Metoptoma peroccidens Walcott. Cotypes.
  Lower Carboniferous. Richmond Mountain, Eureka District, Nevada.

  Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 260, pl. 18, fig. 16.

  = Lepetopsis peroccidens.
- 17359. Metoptoma phillipsi Walcott. Cotypes.
  Upper Pogonip (Ord.). Pogonip Ridge, Eureka District,
  Nevada.
  Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 83, pl. 1, figs.

=Archinacella phillipsi.

35204. Michelinia placenta White. Plesic 35205. Madison (Miss.). Yellowstone National Park. Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 5 67, figs. 3a, 3b. 18198. Mickwitzia monolifera Schmidt. Plesiotype.

Lower Cambrian. Lugnas, Sweden.

Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 704, pl. 70, fig. 2g.

456. Micrabacia americana Meek. Holotype and paratypes. Fox Hills (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 1, pl. 28, figs. 1a, 1b.

38098. Microblattina perdita Scudder. Holotype. Coal Measures. East Providence, Rhode Island.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 57, pl. 3, fig. 5.

46048. Microceras minutissima Ulrich. Cotypes.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 13, pl. 7, fig. 8.

18329. Microdiscus bellimarginatus Shaler and Foerste.

Plesiotype.

Lower Cambrian. Conception Bay, Newfoundland.

Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 630, pl. 81, figs. 2a-2b.

17449. Microdiscus connexus Walcott. Cotype.

Lower Cambrian. Near Salem, Washington County,
New York.

Walcott, Amer. Journ. Sci. (3), XXXIV, 1887, p. 194, pl. 1, figs. 4, 4b; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 631, pl. 80, figs. 9-9b.

18361. Microdiscus helena Walcott. Cotype.

Lower Cambrian. Conception Bay, Newfoundland.

Walcott, Proc. U. S. Nat. Mus., XII, 1889, p. 40; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 632, pl. 81, figs. 1, 1a.

15394. Microdiscus lobatus (Hall). Plesiotype.

Lower Cambrian. Troy, New York.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 156, pl. 16, figs. 1-1b; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 632, pl. 81, figs. 4-4b.

15396. Microdiscus parkeri Walcott. Cotype.

Lower Cambrian. Parker's Quarry, Georgia, Vermont.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 157, pl. 16, figs. 2, 2a; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 632, pl. 80, figs. 7-7a.

15397. Microdiscus speciosus Ford. Plesiotype.
17478. Lower Cambrian. Troy, and Washington County, New York.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 154, pl. 16, fig. 3c; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 632, pl. 81, figs. 5-5c.

14399. Microdon (Cypricardella) connatus Walcott. Cotype. Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 250, pl. 24, figs. 5, 5a.

=Cypricardella connata.

13916. Microdon (Cypricardella) macrostriatus Walcott. Cotype.
Middle Devonian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 180, pl. 5, fig. 5. = Cypricardella macrostriata.

113894. Micromelo (Abderospira) chipolana Dall. Cotypes. Chipola (Oligocene). Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 59, fig. 23.

See Bullina (Abderospira) chipolana.

2137. Micropyrgus minutulus (Meek and Hayden). Holotype.

Laramie (Cret.). Three miles below Fort Union, North
Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 575, pl. 43, figs. 18a, 18b.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 465, pl. 26, fig. 20; Bull. No. 34, U. S. Geol. Surv., 1886, p.31, pl. 2, fig. 24.

See Melania minutula.

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300. Microstizia millepunctata Meek. Holotype and paratypes. Fox Hills (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 4, pl. 28, figs. 2a-c.

25592. Milesia quadrata Scudder. Holotype.

Older Tertiary. Green River, Wyoming.

Scudder, Thirteenth Ann. Rept. U. S. Geol. Surv. Terr., 1890, p. 557, pl. 9, fig. 13.

43270. Mitoclema cinctosum Ulrich. Cotypes and figured sections.

Stones River (Ord.). Bottom of gorge of Kentucky
River, near High Bridge, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 159, pl. 6, figs. 7, 7a.

43297. Mitoclema (?) mundulum Ulrich. Cotypes.
Trenton (Ord.). Cannon Falls, Minnesota.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XII, 1890, p. 177, figs. 4a-c; Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 123, pl. 2, figs. 4-6.

135132. Mitra hammakeri Harris. Holotype. Eocene. Lee Hammaker's Well, Bradley County, Arkan-

Harris, Ann. Rept. Geol. Surv. Arkansas, Pt. II, 1894, p. 163, pl. 6, fig. 4.

97379. Mitra holmesii Dall. Holotype. Pliocene. Near Fort Thompson, Caloosahatchie River. Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 92, pl. 3, fig. 11.

97384. Mitra lineolata Heilprin. Plesiotypes.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Heilprin, Trans. Wagner Free Inst. Sci. Phila., I, 1887, p. 133, pl. 16a, fig. 74.—Dall, ibid., III, Pt. I, 1890, p. 91.

115799. Mitra marylandica Clark.

Cotype.

Eocene. Pamunkey Neck, Maryland.

Clark, Johns Hopkins Univ. Circ. No. 15, 1895, p. 4; Bull. No. 141, U. S. Geol. Surv., 1896, p. 66, pl. 11, figs. 3a-b.

112112. Mitra (mississippiensis var.?) silicata Dall. Holotype. Oligocene. Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 93, pl. 4, fig. 11.

97381. Mitra willcoxii Dall. Holotype.
Pliocene. Near Fort Thompson, Caloosahatchie River,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 93, pl. 3, fig. 10.

97383. Mitromorpha cincta Dall. Holotype.
Pliocene. Near Fort Thompson, Caloosahatchie River,

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 95, pl. 3, fig. 6.

162557. Mitromorpha intermedia Arnold. Holotype. Pleistocene. Deadman Island, off San Pedro, California. Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 223, pl. 4, fig. 10.

97495. Mitromorpha pygmæa Dall. Holotype.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 95, pl. 10, fig. 3.

Modiola contracta Conrad.

Miocene. Sixteen miles south of Trés Pinos, Monterey County, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, V, 1856, p. 325, pl. 5, fig. 35.

1882. Modiola (Perna) formosa Meek and Hayden. Cotypes.

Jurassic. Big Horn Mountains, Wyoming.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1861, p. 439. See Volsella formosa.

111604. Modiola inflata (Tuomey and Holmes). Plesiotype. Miocene. Bridgeton, New Jersey.

> Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 39, pl. 6, fig. 4. = Modiolus inflatus.

23041. Modiola major Gabb.

Plesiotypes. Knoxville (Lower Cret.). Near Stephenson, Tehama County, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 48, pl. 3, fig. 1.

33900. Modiola minor Lea. Holotype. Upper Coal Measures. Near Wilkesbarre, Pennsylvania. Lea, Journ. Acad. Nat. Sci. Phila. (2), II, 1852, p. 205, pl. 20, fig. 2.

7781. Modiola (Brachydontes) multilinigera Meek. Colorado (Cret.). Near Coalville, Utah.

> Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 492. -Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 86, pl. 19,

See Volsella (Brachydontes) multilinigera.

14372. Modiola? nevadensis Walcott. Cotype. Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 239, pl. 19, fig. 8.

22311. Modiola pealei White. Cotypes. Bear River (Cret.). Sage, Wyoming.

White, Bull. No. 128, U. S. Geol. Surv., 1895, p. 33, pl. 2, fig. 3.

6490. Modiola? subelliptica Meek. Cotypes. Upper Carboniferous. Nebraska City, Nebraska. Meek, Final Rept. U.S. Geol. Surv. Nebr. (Hayden), 1872, p. 211,

pl. 10, fig. 5. 154872. Modiola texana (Gabb). Plesiotype. Eocene. Near Red Land, Louisiana.

Harris, Proc. Acad. Nat. Sci. Phila., 1895, p. 46, pl. 1, fig. 2.

33800. Modiola wyomingensis Lea. Upper Coal Measures. Near Wilkesbarre, Pennsylvania. Lea, Journ. Acad. Nat. Sci. Phila. (2), II, 1852, p. 205, pl. 20, = Myalina wyomingensis.

114890. Modiolaria carolinensis Dall. Holotype. Miocene. Natural Well, Duplin County, North Carolina. Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 806, pl. 35, fig. 12.

28166. Modiolodon arcticus Schuchert. Holotype. Trenton (Ord.). Head of Frobisher Bay, Baffin Land. Schuchert, Proc. U. S. Nat. Mus., XXII, 1900, p. 161, pl. 13, figs. 18, 19.

46227. Modiolodon declivis Ulrich. Holotype. Richmond (Ord.). Richmond, Indiana.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 654, pl. 53, figs. 3, 4.

46228. Modiolodon gantii (Safford). Cotypes.
Trenton (Ord.). Wilson County, Tennessee.
Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 521, fig. 4od.
See Cyrtodonta gantii.

46229. Modiolodon? gibbus Ulrich. Holotype.
Black River (Ord.). Near Cannon Falls, Minnesota.
Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 522, pl. 35, figs. 28, 29.

46230. Modiolodon obtusus Ulrich. Cotypes.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 654, pl. 52, figs. 20, 21.

46231. Modiolodon oviformis (Ulrich). Holotype and Plesiotype.
46232. Trenton (Ord.). Curdsville, Kentucky; Wilson County,
Tennessee.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 652, pl. 53, figs. 7, 8; Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 521, fig. 40g.

See Modiolopsis oviformis.

46233. Modiolodon oviformis amplus Ulrich. Cotypes.
Trenton (Ord.). Frankfort, Kentucky.
Ulrich, Geol. Surv. Ohio, VII, 1893, p. 653, pl. 53, figs. 1, 2.

46234. Modiolodon patulus Ulrich. Cotypes.

Trenton (Ord.) Near Kenyon Minnesota: near Dan-

46235. Trenton (Ord.). Near Kenyon, Minnesota; near Dan-46727. ville, Kentucky; Decorah, Iowa.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 521, pl. 37, figs. 20-24.

46236. Modiolodon subovalis Ulrich. Cotypes.
Richmond (Ord.). Versailles, Indiana.
Ulrich, Geol. Surv. Ohio, VII, 1893, p. 655, pl. 51, figs. 11-13.

46237. Modiolodon subrectus Ulrich. Holotype.
Richmond (Ord.). Richmond, Indiana.
Ulrich, Geol. Surv. Ohio, VII, 1893, p. 653, pl. 53, figs. 5, 6.

46238. Modiolodon truncatus (Hall). Plesiotypes.
46239. Richmond (Ord.). Versailles, Indiana.
Lorraine (Ord.). Cincinnati, Ohio.
Ulrich, Geol. Surv. Ohio, VII, 1893, p. 656, pl. 51, figs. 9, 10.

46240. Modiolodon winchelli (Safford). Plesiotypes.

Trenton (Ord.). Wilson County, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 521, figs. 40 c, f.

17445. Modioloides prisca Walcott. Holotype.

Lower Cambrian. Near Whitehall, Washington County,

New York.

Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 615, pl. 73, fig. 3.

 $\cdot = Modiolopsis ?? prisca.$ 

46201. Modiolopsis alata Ulrich.

Cotypes.

Lorraine (Ord.). Covington, Kentucky.

Ulrich, Amer. Geol., V, 1890, p. 280, figs. 8a-c.

=Eurymya alata.

46241. Modiolopsis angustata Ulrich.

Holotype.

Utica (Ord.). Covington, Kentucky.

Ulrich, Amer. Geol., V, 1890, p. 283, figs. 10a-e.

46242. Modiolopsis arguta Ulrich.

Cotypes.

46243. Black River (Ord.). Near Fountain, and Chatfield, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 506, pl. 36, figs. 3-6.

46244. Modiolopsis chatfieldensis Ulrich.

Holotype.

Black River (Ord.). Chatfield, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 508, pl. 36, figs. 9, 10.

46246. Modiolopsis concava Ulrich.

Holotype.

Black River (Ord.). Near Cannon Falls, Minnesota.

Ulrich, Nineteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn., 1892, p. 227, fig. 13; Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 509, pl. 36, figs. 15, 16.

46245. Modiolopsis concentrica Hall and Whitfield. Plesiotypes. Richmond (Ord.). Waynesville, Ohio.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 510, pl. 37, figs. 15, 16.

46247. Modiolopsis? consimilis Ulrich. Holotype. Stones River (Ord.). Murfreesboro, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 505, pl. 42, figs. 17, 18.

46248. Modiolopsis milleri Ulrich.

Cotypes.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Amer. Geol., V, 1890, p. 274, figs. 3a-d.

46249. Modiolopsis modiolaris Conrad.

Plesiotype.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 481, figs. 37a, b.

46341. Modiolopsis modioliformis Meek and Worthen. Plastotype. Stones River (Ord.). Mineral Point, Wisconsin.

Meek and Worthen, Geol. Surv. Ill., III, 1868, p. 294.

=Whiteavesia modioliformis.

46250. Modiolopsis mytiloides Hall.

Plesiotype.

Trenton (Ord.). Wykoff, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 508, pl. 36, fig. 8.

46251. Modiolopsis nana Ulrich.

Holotype.

Trenton (Ord.). Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 507, pl. 36, fig. 7.

46252. Modiolopsis oblonga Ulrich.

Holotype.

Trenton (Ord.). West Covington, Kentucky.

Ulrich, Amer. Geol., V, 1890, p. 272, figs. 1a-c.

46253. Modiolopsis obsoleta Ulrich.

Holotype.

Black River (Ord.). Six miles south of Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 509, pl. 36, figs. 11, 12.

17287. Modiolopsis occidens Walcott.

Cotype.

17288. Upper Pogonip (Ord.). Fish Creek Mountains, and Lone Mountain, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 77, pl. 1, fig. 5; pl. 11, figs. 14, 14a,

46197. Modiolopsis orthonota Meek and Worthen.
Stones River (Ord.). Dunleith, Illinois.

Meek and Worthen, Geol. Surv. Ill., III, 1868, p. 295.

=Endodesma orthonotum.

46231. Modiolopsis oviformis Ulrich.

Holotype.

Trenton (Ord.). Curdsville, Kentucky.

Ulrich, Amer. Geol., V, 1890, p. 276, figs. 4a-c.

= Modiolodon oviformis.

46254. Modiolopsis oweni Ulrich.

Holotype.

Trenton (Ord.). Five miles south of Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 506, pl. 42, figs. 15, 16.

46255. Modiolopsis parva Ulrich.

Cotypes.

46256. Trenton (Ord.). Burgin, Kentucky.

Utica (Ord.). Covington, Kentucky.

Ulrich, Amer. Geol., V, 1890, p. 282, figs. 9a-f.

17292. Modiolopsis pogonipensis Walcott. Cotypes.

17293. Upper Pogonip (Ord.). Fish Creek Mountains and Lone Mountain, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 78, pl. 1, fig. 6; pl. 11, fig. 13.

46343. Modiolopsis pulchella Ulrich. Holotype.
Trenton (Ord.). West Covington, Kentucky.

Ulrich, Amer. Geol., V, 1890, p. 278, figs. 6a-c.

=Whiteavesia pulchella.

46257. Modiolopsis similis Ulrich.

Holotype.

Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Nineteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn.,
1892, p. 225; Geol. and Nat. Hist. Surv. Minn., Final Rept.,
III, Pt. II, 1894, p. 504, pl. 36, figs. 1, 2; pl. 42, fig. 19.

46258. Modiolopsis simulatrix Ulrich.

Holotype.

Utica (Ord.). Covington, Kentucky.

Ulrich, Amer. Geol., V, 1890, p. 277, figs. 5a-c.

46078. Modiolopsis subelliptica Ulrich.

Holotype.

Trenton (Ord.). Near Cannon Falls, Minnesota.

Ulrich, Nineteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn., 1892, p. 226, fig. 12.

=Allodesma subellipticum.

46259. Modiolopsis subparallela Ulrich.

Holotype.

Lorraine (Ord.). Covington, Kentucky.

Ulrich, Amer. Geol., V, 1890, p. 273, figs. 2a-c.

46676. Modiolopsis subtruncata Ulrich.

Holotype.

Utica (Ord.). Covington, Kentucky.

Ulrich, Amer. Geol., V, 1890, p. 270, fig. 7.

46260. Modiolopsis valida Ulrich.

Cotypes.

Richmond (Ord.). Waynesville, Ohio.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 521, fig. 40b.

46261. Modiolopsis versaillensis Miller.

Plesiotype.

Richmond (Ord.). Versailles, Indiana.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 521, fig. 40a.

164893. Modiolus alaskanus Dall.

Holotype.

Eocene. Chichagof Cove, Alaska.

Dall, Harriman Alaska Exped., IV, 1904, p. 106, pl. 10, fig. 3.

154370. Modiolus (Brachydontes) grammatus Dall. Holotype.
Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 794, pl. 30, fig. 2.

- 412 BULLETIN 53, UNITED STATES NATIONAL MUSEUM.
- 114578. Modiolus (Brachydontes) grammatus curtulus Dall.
  Cotypes.
  Oligoçene. Alum Bluff, Chattahoochee River, Florida.
  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 794.
- r35747. Modiolus (Brachydontes) guppyi Dall, Holotype.
  Oligocene. Bowden, Jamaica.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 794, pl. 35, fig. 16.
- 164894. Modiolus harrimani Dall. Holotype. Eocene. Chichagof Cove and Peak, Alaska.

  Dall, Harriman Alaska Exped., IV, 1904, p. 106, pl. 9, fig. 7.
- 154364. Modiolus (Gregariella) minimus Dall. Holotype.
   Oligocene. Ballast Point, Tampa, Florida.
   Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 797, pl. 35, fig. 26.
- 153890. Modiolus pugetensis Dall. Holotype. Eocene. Renton coal mine, near Seattle, Washington.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 792, pl. 35, fig. 17.
- 154349. Modiolus silicatus Dall. Holotype.
  Oligocene. Ballast Point, Tampa, Florida.

  1)all, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 793, pl. 27, fig. 28. (On plate as M. tampaënsis.)

  Modiolus tampaënsis Dall. See M. silicatus.
- 13894. Modiomorpha altiforme Walcott. Cotype.
  Middle Devonian. Lone Mountain, near Eureka, Nevada.
  Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 169, pl. 5, fig. 9.
- 14373. Modiomorpha ambigua Walcott. Holotype. Lower Carboniferous. Eureka District, Nevada.

  Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 239, pl. 20, fig. 1.
- 14982. Modiomorpha (?) chemos Clarke. Holotype. Genesee (Dev.). Bristol, New York.
  Clarke, Bull. No. 16, U. S. Geol. Surv., 1885, p. 30.
- 14374. Modiomorpha? desiderata Walcott. Cotypes. Lower Carboniferous. Eureka District, Nevada.

  Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 240, pl. 20, fig. 3.
- 12519. Modiomorpha? lata Meek. Holotype.
  Upper Triassic. North Fork of Buena Vista Canyon,
  West Humboldt Range, Nevada.

  Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 103,
  pl. 10, fig. 2.

15893. Modiomorpha oblonga Walcott. Holotype. Middle Devonian. Atrypa Peak, Eureka District, Nevada.
 Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 170, pl. 5, fig. 7.
 =Sanguinolites (Spathella) oblonga.

13892. **Modiomorpha obtusa** Walcott. Cotypes. Middle Devonian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 171, pl. 4, figs. 8, 8a.

12543. Modiomorpha? (Modiolina) ovata Meek. Cotypes.
Upper Triassic. North Fork of Buena Vista Canyon,
West Humboldt Range, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 103, pl. 10, figs. 1, 1a.

24327. Modiomorpha pimentana Hartt and Rathbun. Cotypes.
Middle Devonian. Ereré, Para, Brazil.

Hartt and Rathbun, Ann. Lyceum Nat. Hist. N. Y., XI, 1875, p, 123.—Clarke, Archivos do Mus. Rio de Janeiro, X, 1899, p. 52, pl. 6, figs, 5-9.

14375. Modiomorpha? pintoënsis Walcott. Cotype. Lower Carboniferous. Near Pinto Peak, Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 240, pl. 20, fig. 2.

Oligocene. Alum Bluff, Chattahoochee River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 294, pl. 22, fig. 10.

Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892,

p. 294, pl. 18, fig. 12.

113386. Modulus willcoxii Dall. Cotypes.
Oligocene. West of Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 294, pl. 18, fig. 1a.

Moleria duplinensis Dall.

Miocene. Natural Well, Duplin County, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892,
p. 421, pl. 23, fig. 18.

87750. Molleria minuscula Dall. Holotype.
Miocene. St. Marys River, Maryland.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 421.

= Cyclostrema (Molleria) minuscula.

111660. Monilea (Leiotrochus) eborea Wagner. Plesiotype.
Miocene. Jericho, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 135, pl. 24, figs. 7-10.

- 414 BULLETIN 53, UNITED STATES NATIONAL MUSEUM.
- 115469. Monodonta basilea Guppy. Holotype.

Oligocene. Jamaica, British West Indies.

Guppy, Geol. Mag., London, Dec., II, I, 1874, p. 434, pl. 16, fig. 2. = Modulus basileus.

12364. Monopleura marcida White. Cotypes. Edwards (Cret.). Near Austin, Texas.

White, Bull. No. 4, U. S. Geol. Surv., 1884, p. 8, pls. 3, 4.

- 12365. Monopleura pinguiscula White. Cotypes. Edwards (Cret.). Near Austin, Texas.

  White, Bull. No. 4, U. S. Geol. Surv., 1884, p. 8, pl. 5.
- 35313. Monopteria alata Beede. Plesiotype. Rico (Upper Carb.). Scotch Creek, Rico quadrangle, Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 431, pl. 9, fig. 3.

15595. Monopteria marian White. Cotypes. Upper Carboniferous. Camp Apache, Navajo County, Arizona.

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 1874, p. 22; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1877, p. 151, pl. 11, figs. 4a-4c.

3958. Monotis hawni Meek and Hayden. Cotypes.
Permian. Smoky Hill River, Kansas.

Meek and Hayden, Trans. Albany Inst., IV, 1858, p. 76.

=Pseudomonotis hawni. See Eumicrotis hawni.

- 30192. Monotis semiplicata Hyatt. Cotypes.
  Triassic. American Canyon, California.
  Hyatt, Bull. Geol. Soc. Amer., V, 1894, p. 414.
- 30193. Monotis symmetrica Hyatt. Cotypes.
  Triassic. American Canyon, California.
  Hyatt, Bull. Geol. Soc. Amer., V, 1894, p. 414.
- 43556. Monotrypa (Chætetes?) cumulata Ulrich. Holotype and figured sections.

  Trenton (Ord.). Goodhue County, Minn.

  Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 307, pl. 27, figs. 26, 27.
- 43553. Monotrypa intabulata Ulrich. Holotype and figured sections.

  Trenton (Ord.). Goodhue County, Minn.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 305, fig. 20.

43555. Monotrypa magna Ulrich. Holotype and figured sections. Stones River (Ord.). Dixon, Illinois.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 304, pl. 27, figs. 28, 29.

43554. Monotrypa nodosa Ulrich.

Cotypes.

Richmond (Ord.). Savannah, Illinois.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 306.

43779. Monotrypa rectimuralis Ulrich. Cotype and figured

sections.

Cincinnatian (Ord.). Alexander County, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 462, pl. 38, figs. 4a, 4b.

43684. Monotrypella æqualis Ulrich. Holotype and figured sections.

Utica (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 247, pl. 11, figs. 3-3b.

43751. Monotrypella appressa Ulrich. Cotypes and figured sections.

Middle Devonian. Rock Island, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 453, pl. 46, figs. 1-1e (on plate as M. simplex in error).

=Eridotrypa appressa.

43780. Monotrypella crassimuralis Ulrich. Figured sections of cotype.

Richmond (Ord.). Wilmington, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 452, pl. 38, figs. 2c-2f.

=Rhombotrypa crassimuralis.

35401. Monotrypella quadrata (Rominger). Plesiotypes. Richmond (Ord.). Oxford, Ohio.

Hayes and Ulrich, U. S. Geol. Surv., Folio 95, 1903, illustration sheet, figs. 9, 10.

=Rhombotrypa quadrata.

43685. Monotrypella subquadrata Ulrich. Cotypes and figured sections.

Richmond (Ord.). Osgood, Indiana.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 249, pl. 11, figs.4-4b.

=Rhombotrypa subquadrata.

135874. Montacuta? actinophora Dall. Holotype. Upper Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1172, pl. 44, fig. 2.

115675. Montacuta? chipolana Dall. Holotype.
Oligocene. Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1171, pl. 44, fig. 4.

155768. Montacuta claiborniana Dall. Holotype.

Claibornian (Eocene). Claiborne, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1171, pl. 45, fig. 21.

144171. Montacuta mariana Dall. Holotype.

Miocene. St. Marys River, Maryland.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1173, pl. 45, fig. 18.

155770. Montacuta petropolitana Dall. Holotype.
Miocene. Petersburg, Virginia.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1173, pl. 45, fig. 6.

115772. Montacuta sagrinata Dall. Holotype.

Miocene. York River, Virginia.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1174, pl. 44, fig. 6.

43547. Monticulipora arborea Ulrich. Cotypes and figured sections.
43548. Trenton (Ord.). Cannon Falls, Minnesota; near Burgin,
Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 220, pl. 20, figs. I-9, 13, 14.

43549. Monticulipora (?) cannonensis Ulrich. Holotype and figured section.

Trenton (Ord.). Near Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 221, pl. 20, figs. 10-12.

43170. Monticulipora cleavelandi James. Plesiotype and figured sections.

Richmond (Ord.). Four and a half miles northwest of Wilmington, Ohio.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 16, pl. 6, figs. 4-6.

4368o. Monticulipora consimilis Ulrich. Holotype. Richmond (Ord.). Oxford, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 238, pl. 10, fig. 2.

= Monticulipora lævis consimilis.

8551. Monticulipora dalii (Edwards and Haime). Plesiotype.
Trenton (Ord.). Silver Canyon, Pahranagat Range,
Nevada.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 66, pl. 4, fig. 5. 43172. Monticulipora epidermata Ulrich and Bassler. Cotypes. Richmond (Ord.). Richmond, Indiana.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 17

43591. Monticulipora grandis Ulrich. Cotypes and figured sections. Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 219, pl. 15, figs. 1-6.

=Prasopora grandis.

43679. Monticulipora lævis Ulrich. Cotypes and figured sections. Richmond (Ord.). Oxford, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 236, pl. 10, figs. 1-1b.

43303. Monticulipora lamellosa 'Ilrich. Figured sections and fragment of holotype.

Richmond (Ord.). Wilmington, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 408, pl. 32, figs. 4, 4b. =Orbignyella lamellosa.

35114. Monticulipora mammulata d'Orbigny. Figured section and fragment of holotype.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 16, pl. 6, figs. 1-3.

43682. Monticulipora mammulata d'Orbigny. Plesiotype and figured sections.

Lorraine (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 234, pl. 10, figs. 5, 5a.

35405. Monticulipora molesta Nicholson. Plesiotype.

Lorraine (Ord.). Two miles west of Goodletsville,

Tennessee.

Hayes and Ulrich, U. S. Geol. Surv., Folio 95, 1903, illustration sheet, fig. 13.

9207. Monticulipora monticula White. Cotypes.
Upper Devonian. Iowa City, Iowa.
White, Proc. Acad. Nat. Sci. Phila., 1876, p. 27.

43681. Monticulipora parasitica Ulrich. Holotype and figured sections.

Richmond (Ord.). Oxford, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V. 1882, p. 238, pl. 10, figs. 3, 3a.

43811. Monticulipora parasitica plana Ulrich. Figured sections of holotype.

Richmond (Ord.). Stony Mountain, Manitoba.

Ulrich, Geol. Surv. Canada, Contrib. Micro-Pal., Cambro-Sil., Pt. II, 1889, p. 29, pl. 8, figs. 3a-3d.

43690. Monticulipora wetherbyi Ulrich. Cotypes and figured sections.

Stones River (Ord.). High Bridge, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., v. 1882, p. 239, pl. 10, figs. 4-4b.

= Orbignyella wetherbyi.

43302. Monticulipora winchelli Ulrich. Figured sections of holotype.

Traverse (Dev.). Thunder Bay, Michigan.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 408, pl. 45, figs. 6-6a.

41685. Moorea angularis Ulrich. Cotypes. 41800. Black River (Ord.). Fountain, and Minneapolis, Minne-

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 682, pl. 43, fig. 89; pl. 46, figs. 15, 16.

41683. Moorea bicornuta Ulrich. Holotype. Hamilton (Dev.) Eighteen Mile creek, New York.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 191, pl. 16, figs. 4a-c.

41680. Moorea granosa Ulrich.

Chester (Miss.). Near Grayson Springs Station, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 206, pl. 12, figs. 9a, 9b.

41684. Moorea punctata Ulrich.

Cotypes.

Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 682, pl. 43, figs. 84–88.

1991. Mortoniceras shoshonense Meek. Holotype.
Colorado (Cret.). Head of Wind River Valley, Wyoming.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 449, pl. 6, figs. 3a, 3c, and 6b, upper figure.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 179, pl. 43, figs. 1, 2.

224. Mortoniceras? vermilionense (Meek and Hayden).

Holotype.

Colorado (Cret.). Mouth of Vermilion River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 450, pl. 7, figs. 2a, 2b,—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 180, pl. 44, fig. 1.

See Ammonites vermilionense.

153751. **M**ulinia caloosaënsis Dall. Cotypes. Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 902, pl. 28, figs. 4, 6.

153750. Mulinia sapotilla Dall. Cotypes.

Pliocene. Shell Creek, De Soto County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 902, pl. 28, figs. 7, 8, 9, 14.

17903. Murchisonia bellicincta Hall. Plesiotype.
Trenton (Ord.). Elkader, Turkey River, Iowa.

Owen, Rept. Geol. Surv. Wis., Iowa and Minn., 1852, pl. 2, fig. 8. = Hormotoma (?) major.

8927. Murchisonia copei White.

Cotypes.

Upper Carboniferous. Near Taos, New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., III, Suppl., 1881, p. 31, pl. 3, figs. 10a, 10b.

25613. Murchisonia gracilis Hall? Plesiotype.
Ordovician. Near South Berlin, Vermont.

Walcott, Amer. Journ. Sci. (3), XXXV, 1888, p. 239, text fig. 7.

25614. Murchisonia milleri Hall? Plesiotypes.
Ordovician. Pownal, Bennington County, Vermont.

Walcott, Amer. Journ. Sci. (3), XXXV, 1888, p. 237, fig. 3.

17326. Murchisonia milleri Hall? Plesiotype.
Upper Pogonip (Ord.). White Pine District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 79, pl. 1, figs.
12, 12b.

45928. Murchisonia sumnerensis Safford. Cotypes.
Trenton (Ord.). Sumner County, Tennessee.
Safford, Geol. Tenn., 1869, pl. G, figs. 1a-f.

=Lophospira sumnerensis.

8233. Murchisonia terebra White. Cotypes.
Upper Carboniferous. Wild Band Pockets, Arizona.

White Bull No. 5. U. S. Cool Surv. Terr. 1870, p. 410; Twelfth

White, Bull. No. 5, U. S. Geol. Surv. Terr., 1879, p. 219; Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1880, p. 139, pl. 34, fig. 4a.

112065. Murex (Chicoreus?) burnsii (Whitfield). Plesiotype. Oligocene. Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 141.

135155. Murex (Pteronotus) burnsii (Aldrich). Plesiotyp Eocene. Carsons Creek, Wayne County, Mississippi. Dall, The Nautilus, VII, No. 9, 1894, p. 98, pl. 4, fig. 4. Oligocene. Ten Mile Creek, Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 139.

Oligocene. Jamaica, British West Indies.

Guppy, Geol. Mag., London, Dec. II, I, 1874, p. 433, pl. 16, fig. 8.

87749. Murex (Pterorhytis) conradi Dall. Cotypes.
Miocene. St. Marys River, Maryland.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 143, pl. 12, figs. 8, 11.

135148. Murex marksi Harris. Holotype. Eccene. One mile northeast of Pansy, Cleveland County, Arkansas.

Harris, Ann. Rept. Geol. Surv. Arkansas, 1894, Pt. II, p. 167, pl. 6, fig. 10.

Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 141, pl. 12, fig. 12.

111626. **Murex shilohensis burnsi** Whitfield. Holotype. Miocene. Jericho, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 98, pl. 17, fig. 2.

112165. Murex (Pteronotus) textilis (Gabb). Plesiotype.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 142, pl. 9, fig. 4.

Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 149,

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 149, pl. 8, fig. 9.

3608. Mya abrupta Conrad.
Miocene. Astoria, Oregon.

Holotype.

Conrad, Wilkes U. S. Expl. Exped., X, 1849, p. 723, Atlas, pl. 17, figs. 5, 5a.

= Panopea abrupta.

15224. Myacites inconspicuus Meek. Holotype.

Jurassic. Weber Canyon, Wahsatch Range, Utah.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV Pt. I, 1877, p. 137, pl. 12, fig. 17

210. Myacites nebrascensis Meek and Hayden. Holotype.
Jurassic. Southwest base of Black Hills, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1860, p. 182; Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 100, pl. 4, fig. 5.

8061. Myacites subcompressus Meek. Plesiotypes. 8180. Jurassic. Devils Slide, and near Lower Canyon of Yellowstone, Montana.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 151, pl. 38, figs. 5a-e.

200. Myacites subellipticus (Meek and Hayden). Cotypes.

Jurassic. Southwest base of Black Hills, South Dakota.

Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Knowl. No. 172, XIV, 1864, p. 101, pl. 4, figs. 6a-c.

See Panopea (Myacites) subelliptica.

13386. Myacites (Pleuromya) weberensis Meek. Holotype.
Jurassic. Weber Canyon, Wahsatch Range, Utah.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 137, pl. 12, figs. 11a.

2526. Myalina aviculoides Meek and Hayden. Cotypes. 3961. Permian. Cottonwood Creek, Kansas.

Permian. Cottonwood Creek, Kansas.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1860, p. 184; Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 51, pl. 2, figs. 8a-d.

- 15227. Myalina aviculoides Meek and Hayden. Plesiotypes.
  Permian or Triassic. Southeast of Salt Lake City, Utah.
  Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II,
  1877, p. 275, pl. 6, fig. 8.
- 21696. Myalina aviculoides Meek and Hayden. Plesiotype. Permian. Godwin Creek, Baylor County, Texas.

  White, Bull. No. 77, U. S. Geol. Surv., 1891, p. 28, pl. 2, fig. 12.
- 14369. Myalina congeneris Walcott. Cotypes.

  Lower Carboniferous. Richmond Mountain, Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 237, pl. 19, fig. 6; pl. 22, fig. 10.

35310. Myalina cuneiformis Gurley. Plesiotypes.
35311. Weber and Hermosa? (Upper Carb.). Ouray, and branch of Cement Creek, Crested Butte quadrangle, Colorado.
Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 420, pl. 8, figs. 14-17.

35306. Myalina keokuk Worthen. Plesioty
Ouray (Miss.). Near Cascade Creek, Engineer Mounquadrangle, Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 309, pl. 1, fig. 12.

14370. Myalina nemesis Walcott. Cotype.

Lower Carboniferous. Near Pinto Peak, Eureka District,
Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 237, pl. 19, fig. 5; pl. 22, fig. 7.

14371. Myalina nessus Walcott.

Cotype.

Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon, VIII, U. S. Geol. Surv., 1884, p. 238, pl. 22, figs. 8, 8a.

1022. Myalina perattenuata Meek and Hayden. Holotype and paratype.

Upper Carboniferous. "Opposite north boundary of Missouri, on the Missouri River" = Region of Nemaha, Nebraska.

Meek and Hayden, Trans. Albany Inst., IV, 1858, p. 77; Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 32, pl. 1, figs. 12a, 12b.

21727. Myalina perattenuata Meek and Hayden. Plesiotype.
Permian. Archer and Baylor counties, Texas.

White, Bull. No. 77, U. S. Geol. Surv., 1891, p. 28, pl. 4, figs. 13-15.

8933. Myalina permiana (Swallow). Plesiotypes.

9445. Upper Carboniferous. Coyote and Cebolla creeks, and 9456. Taos Peak, New Mexico.

'Vhite, Rept. U. S. Geogr. Surv. W. 100th Merid., III, Suppl., 1881, p. 25, pl. 3, figs, 1a-1d.

15226. Myalina permiana (Swallow). Plesiotypes.
Permian or Triassic. Southeast of Salt Lake City, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 276, pl. 6, fig. 7.

21726. Myalina permiana (Swallow). Plesiotype. Permian. Archer and Baylor counties, Texas.

White, Bull. No. 77, U. S. Geol. Surv., 1891, p. 28, pl. 4, figs. 16-19.

1153. Myalina permiana (Swallow). Plesiotypes.
Permian. Cottonwood Creek, Kansas.

Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 52, pl. 2, figs. 7a-c.

998. Myalina subquadrata Shumard. Plesiotypes. Upper Carboniferous. Leavenworth, Kansas.

Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 33, text figs. A, B.

35307. Myalina subquadrata Shumard. Plesiotypes.
Rico (Upper Carb.). Scotch Creek, Rico quadrangle,
Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 424, pl. 8, figs. 6, 7.

6519. Myalina (?) swallovi McChesney. Plesiotypes. Upper Carboniferous. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Nebraska (Hayden), 1872, p. 201, pl. 9, figs. 7a, 7b.

8478. **Myalina? swallovi** McChesney. Plesiotype. Upper Carboniferous. Fort Apache, Navajo County, Arizona.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 152, pl. 11, fig. 8a.

35308. Myalina wyomingensis Lea. Plesiotypes. 35309. Rico (Upper Carb.). Scotch Creek, Rico quadrangle,

 Rico (Upper Carb.). Scotch Creek, Rico quadrangle, Colorado, and Graham, Young County, Texas.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 422, pl. 8, figs. 8-13.

38051. **Mylacris ampla** Scudder. Holotype. Upper Coal Measures. Mazon Creek, Grundy County, Illinois.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 45, pi. 2, fig. 1.

38050. Mylacris antiqua Scudder. Holotype.
Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1884, p. 300; Foss. Insects N. America, I, 1890, p. 264; Bull. 124, U. S. Geol. Surv., 1895, p. 46, pl. 2, figs. 5, 6.

38052. **Mylacris carbonum** Scudder. Cotypes. 38053. Upper Coal Measures. Empire Mine, Wilkesbarre and Cannelton, Pennsylvania.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1884, p. 304, pl. 27, figs. 6, 7, 10; Foss. Insects N. America, I, 1890, p. 268, pl. 13, figs. 6, 7, 10.

25924. Mylacris (Dipeltis) diplodiscus Packard. Cotype and plesiotype.

38864. Upper Coal Measures. Mazon Creek, Grundy County, Illinois.

Packard, American Nat., XIX, 1885, p. 293; Mem. Nat. Acad. Sci. III, 1886, p. 145, pl. 5, fig. 2.—Schuchert, Proc. U. S. Nat. Mus., XIX, 1897, pl. 58, figs. 3, 5.—Sellards, Amer. Journ. Sci. (4), XV, 1903, pl. 7, fig. 8.

[This is now known to be the larva of a cockroach.]

38049. **Mylacris elongata** Scudder. Holotype. Upper Coal Measures. Mazon Creek, Grundy County, Illinois.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 41, pl. 1, fig. 6.

38054. Mylacris lucifuga Scudder. Hole Upper Coal Measures. Port Griffith Switchback, Pittston, Pennsylvania.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1884, p. 301, p. fig. 8; Foss. Insects N. America, I, 1890, p. 265, pl. 13, 4,

38101. **Mylacris ovalis Scudder.** Cotypes. Upper Coal Measures. Cannelton, Pennsylvania.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1884, p. 308, pl. 27, fig. 5; Foss. Insects N. America, I, 1890, p. 272, pl. 13, fig. 5.

38102. Mylacris pennsylvanica Scudder. Cotypes. Upper Coal Measures. Cannelton, Pennsylvania.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1884, p. 302, pl. 27, fig. 11; Foss, Insects N. America, I, 1890, p. 266, pl. 13, fig. 11.

38055. **Mylacris priscovolans** Scudder. Cotypes. Upper Coal Measures. Cannelton, Pennsylvania.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1884, p. 307, pl. 27, fig. 9; Foss. Insects N. America, I, 1890, p. 271, pl. 13, fig. 9.

23042. Myoconcha americana Stanton. Holotype. Knoxville (Lower Cret.). Near Stephenson, Tehama County, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 48, pl. 2, figs. 11.

8586. Myophoria ambilineata White. Holotype.
Jurassic. Camp Cottonwood, Old Mormon Road, Nevada.
White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, I, 1876,
p. 166, pl. 13, figs. 5a, b.

135714. Myrtæa (Eulopia) furcata Dall. Holotype.
Bowden (Oligocene). Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1359, pl. 52, fig. 13.

157637. Myrtæa limoniana Dall.

Bowden (Oligocene). Bowden, Jamaica.

Holotype.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1358, pl. 52, fig. 10.

135717. Myrtæa (Eulopia) vermiculata Dall. Holotype.
Bowden (Oligocene). Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1359, pl. 52, fig. 5.

111596. Mysia parilis Conrad.
111609. Miocene. Bridgeton, New Jersey.

Plesiotype.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 61, pl. 9, figs. 10-13.

Upper Devonian. The Gate, near Eureka, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 168, pl. 4, fig. 9.

13885. Mytilarca dubia Walcott.

Middle Devonian. Lone Mountain, near Eureka, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 168, pl. 4, fig. 5.

13888. Mytilarca (Plethomytilus) oviformis (Conrad).

Plesiotype.

Middle Devonian. Lone Mountain, near Eureka, Nevada. Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 169, pl. 5, fig. 11.

111603. Mytiloconcha incrassata (Conrad). Plesiotype.
Miocene. Shiloh, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 38, pl. 5, figs. 10, 11.

486. Mytilus attenuatus Meek and Hayden. Holotype. Fox Hills (Cret.). Moreau River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 86. = Modiola attenuata.

13319. Mytilus inezensis Conrad. Cotypes.
Miocene. Santa Inez Mountains, Monterey County, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 194, pl. 8, figs. 2, 3?

153344. **Mytilus pandionis** Dall. Holotype. Oligocene. Near Osprey, Little Sarasota Bay, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 787, pl. 30, figs. 9, 10.

354. Mytilus subarcuatus Meek and Hayden. Holotype.
Fox Hills (Cret.). Dog River, near mouth of Judith
River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 276.—Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 69, pl. 38, figs. 2a, 2b.

12312. Mytilus whitei Whitfield. Cotypes.

Jurassic. Near Sun Dance Hills, Black Hills, South
Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 360, pl. 5, figs. 9-12.

8177. Mytilus whitei Whitfield. Plesiotype.

Jurassic. Near Fontanelle Canyon, western Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883,
p. 147, pl. 37, fig. 9a.

112140. Nassa bidentata (Emmons). Plesiotypes.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phil., III, Pt. I, 1890, p. 133, pl. 9, fig. 9.

112142. Nassa caloosaënsis Dall.

Pliocene. Caloosahatchie River, near Fort Thon
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, ppl. 9, fig. 7.

162553. Nassa cerritensis Arnold. Holotype-Pleistocene. Spanish Bight, San Diego, California.

Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 231, pl. 4, fig. 1.

124961. Nassa johnsoni Dall.
Miocene. Cape Fear River, North Carolina.

Holotype.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 241, pl. 13, fig. 12.

Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 133, pl. 9, fig. 8.

Holotype.

115490. Nassa solidula Guppy.
Miocene. Cumana, Venezuela.

Guppy, Quar. Journ. Geol. Soc. London, XXII, 1866, p. 579, pl. 26, fig. 11.

112136. Nassarina glypta (Bush). Plesiotypes.
Pliocene. Near Fort Thompson, Caloosahatchie River,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 132, pl. 9, fig. 11.

Oligocene. Ten-Mile Creek, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 365, pl. 22, fig. 28.

267. Natica? ambigua Meek and Hayden. Holotype and paratype.

Montana (Cret.). Yellowstone River, near Miles Čity, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 64. = Vanikoro ambigua.

9865. Natica collina Conrad.

Cretaceous. Between Rio San Pedro and Rio Puercos,
Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 157, pl. 13, figs. 2a, 2b.

Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892.

111652. Natica (Lunatia) hemicrypta (Gabb). Plesiotypes.

Miocene. Shiloh and Jericho, New Jersey.

p. 366, pl. 17, fig. 5.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 118, pl. 22, figs. 1-5.

12359. Natica inezana Conrad. Cotypes.

Miocene. Santa Inez, Santa Barbara County, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 195, pl. 10, figs. 5, 6.

= Polynices (Neverita) recluziana.

12536. Natica? lelia Hall and Whitfield.

Cotypes.

Jurassic. Northwest of Rawlings, Wyoming, and east fork of Duchesne River, Uinta Range, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 298, pl. 7, figs. 19-21.

9898. Natica limula Conrad.

Plesiotypes.

Tertiary. Western Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 162, pl. 19, fig. 7.

264. Natica moreauensis Meek and Hayden. Holotype and paratypes.

Fox Hills (Cret.). Moreau, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 64. = Lunatia concinna.

290. Natica occidentalis Meek and Hayden. Holotype. Fox Hills (Cret.). Moreau River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 64. = Lunatia occidentalis.

1836. Natica œtitis Conrad.

Plesiotype.

Eocene. Canada de las Uvas, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, V, 1856, p. 321, pl. 2, fig. 7.

265. Natica subcrassa Meek and Hayden. Holotype and paratypes.

Fox Hills (Cret.). Mouth of Judith River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 87.

- Lunatia subcrassa.

9861. Natica texana Conrad.

Holotype.

Cretaceous. Between Rio San Pedro and Rio Puercos, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 157, pl. 13, figs. 1a, 1b.

266. Natica tuomeyana Meek and Hayden. Holotype.

Fox Hills (Cret.). Mouth of Judith River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 270. = Vanikoropsis tuomeyana.

111651. Natica (Lunatia) tuomeyi Whitfield. Cotypes.

Miocene. Jericho, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 120, pl. 22, figs. 6-8.

115450. Naticina regia Guppy. Holotype. Oligocene. Jamaica, British West Indies.

Guppy, Geol. Mag., London, Dec. II, I, 1874, p. 406, pl. 17, fig. 6.

8930. Naticopsis altonensis McChesney. Plesiotypes.
Upper Carboniferous. Near Taos, New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., III, Suppl. 1881, p. 35, pl. 3, fig. 6a.

33979. Naticopsis? (Isonema) humilis (Meek). Plesiotype. 33981. Ouray (Upper Dev.). Five localities in central Colorado.

Girty, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 60, pl. 7, figs. 9-11.

9459. Naticopsis monilifera White. Cotype. Upper Carboniferous. Near Taos, New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., III, Suppl., 1881, p. 34, pl. 3, fig. 3d.

8508. Naticopsis nana Meek and Worthen. Plesiotypes.
Upper Carboniferous. Camp Cottonwood, near Spring
Mountain, Lincoln County, Nevada.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 159, pl. 12, figs. 4a, 4b.

=Strophostylus nana.

8063. Naticopsis remex White. Cotype.
Upper Carboniferous. Confluence of Grand and Green rivers, Utah.

White, Rept. Geol. Uinta Mts. (Powell.), 1876, p. 109; Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1883, p. 139, pl. 34, fig. 6a.

21711. Naticopsis remex White. Plesiotype.

Permian. Military Crossing of the Big Wichita, Baylor
County, Texas.

White, Bull. No. 77, U. S. Geol. Surv., 1891, p. 24, pl. 3, fig. 10.

21694. Naticopsis shumardi McChesney. Plesiotype.
Permian. Godwin Creek, Baylor County, Texas.

White, Bull. No. 77, U. S. Geol. Surv., 1891, p. 24, pl. 3, fig. 11.

8932. Naticopsis wheeleri Swallow var. Plesiotypes. Upper Carboniferous. Near Taos, New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., III, Supp.., 1881, p. 33, pl. 4, figs. 6a, 6b.

=Trachydomia wheeleri.

Nautilus ———? White = Nautilus (Coloceras) globulare.

3610. Nautilus angustatus Conrad.

Cotypes.

Miocene. Astoria, Oregon.

Conrad, Wilkes U. S. Expl. Exped., X, 1849, p. 728, Atlas, pl. 20, fig. 5.

12461. Nautilus campbelli Meek.

Holotype.

Nanaimo (Cret.). Komooks, Vancouver Island.

Meek, Proc. Acad. Nat. Sci. Phila., for 1861, p. 318; Bull. U. S. Geol. and Geogr. Surv. Terr., II, No. 4, 1876, p. 373, pl. 6, figs. 2, 2a.

390. Nautilus dekayi Morton.

Plesiotypes.

Fort Pierre (Cret.). Sage Creek and Yellowstone River, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 496, pl. 27, figs. 1a-e.

392. Nautilus dekayi montanaensis Meek.

Holotype.

Montana (Cret.). Yellowstone River, near Miles City, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 498, pl. 27, figs. 2a, 2b.

12347. Nautilus dekayi montanaensis Meek.

Plesiotypes.

Fort Pierre (Cret.). Cheyenne River, near Rapid Creek, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 439, pl. 16, figs. 10, 11.

4185. Nautilus eccentricus Meek and Hayden.

Cotypes.

Permian. Near mouth of Smoky Hill River, Kansas.

Meek and Hayden, Trans. Albany Inst., IV, 1858, p. 83; Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 65, pl. 2, figs. 14a, 14b.

1912. Nautilus elegans Sowerby.

Plesiotypes.

Colorado (Cret.) Chippewa Point, Missouri River, near Fort Benton, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 499, pl. 8, figs. 2a-c.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 163, pl. 35, fig 1.

1912. Nautilus elegans nebrascensis Meek and Hayden.

Holotype.

Colorado (Cret.). Chippawa Point, Missouri River, near Fort Benton, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1862, p. 25.

21717. Nautilus (Coloceras) globulare Hyatt. Plesiotype.
Permian. Military Crossing of the Big Wichita, Baylor
County, Texas.

White, Bull. No. 77, U. S. Geol. Surv., 1891, p. 23, pl. 3, figs. 6-8 (as Nautilus ———?).

30241. Nautilus hilli Shattuck. Holotype.

Buda (Lower Cret.). Shoal Creek, Austin, Texas.

Shattuck, Bull. No. 205, U. S. Geol. Surv., 1903, p. 35, pl. 23, fig. 3; pl. 24, figs. 3, 4.

6525. Nautilus occidentalis Swallow. Plesiotypes.
Upper Carboniferous. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv., Nebraska (Hayden), 1872, p. 234, pl. 11, fig. 17.

=Tainoceras occidentalis.

21712. Nautilus occidentalis Swallow. Plesiotype.

Permian. Military Crossing of the Big Wichita, Baylor
County, Texas.

White, Bull. No. 77, U. S. Geol. Surv., 1891, p. 23, pl. 2, figs. 11, 12. = Tainoceras occidentalis.

21719. Nautilus (Temnocheilus) winslowi Meek and Worthen. Plesiotype.

Permian. Military Crossing of the Big Wichita, Baylor County, Texas.

White, Bull. No. 77, U. S. Geol. Surv., 1891, p. 23, pl. 3, figs. 1-5. = Temnocheilus winslowi.

12327. Neæra longirostra Whitfield. Holotype.

Jurassic. Redwater Valley, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 376, pl. 5, fig. 35.

420. Neæra moreauensis (Meek and Hayden). Holotype and paratypes.

Montana (Cret.). Moreau and Yellowstone rivers, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 239, pl. 17, figs. 11a-c.

See Corbula moreauensis.

12272. Neæra moreauensis (Meek and Hayden). Plesiotype.
Cretaceous. Forks of Cheyenne River, Black Hills,
South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 420, pl. 11, fig. 31.

419. Neæra ventricosa (Meek and Hayden). Holotype and paratypes.

Montana (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 238, pl. 30, figs. 3a-c.

See Corbula ventricosa.

38534. Necromyza pedata Scudder. Holotype.

Upper Miocene. Oeningen, Baden, Germany.

Scudder, Geol. Mag., London, Dec. IV, II, 1895, p. 121, pl. 6, fig. 5.

38056. Necymylacris heros Scudder. Holotype.
Upper Coal Measures. Boston Mine, near Pittston, Pennsylvania.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1879, p. 54, pl. 5, fig. 9; Foss. Insects N. America, I, 1890, p. 74, pl. 5, fig. 9.

38057. **Necymylacris lacoana** Scudder. Holotype. Upper Coal Measures. Boston Mine, near Pittston, Pennsylvania.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1879, p. 53, pl. 5, fig. 12; Foss. Insects N. America, I, 1890, p. 73, pl. 5, fig. 12.

9872. Neithea occidentalis Conrad.
Lower Cretaceous. Texas.

Paratypes.

Conrad Pant II S Maxison Round Su

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 150.

9896. Neithea texana (Roemer). Plesiotypes.
Lower Cretaceous. Between El Paso and Frontera, Texas.
Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857,
p. 151.

43687. Nematopora conferta Ulrich.

Holotype.

Trenton (Ord.). Cannon Falls, Minnesota.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XII, 1890, p. 198, fig. 22; Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 206, pl. 3, figs. 21-23.

44100. Nematopora delicatula Ulrich. Plesiotypes. Trenton (Ord.). Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 206, pl. 3, figs. 26, 27.

43688. Nematopora granosa Ulrich.

Cotypes.

Trenton (Ord.). Cannon Falls, Minnesota.

Ulrich, Jour. Cincinnati Soc. Nat. Hist., XII, 1890, p. 196, figs. 20, 20a-e; Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 205, pl. 3, figs. 17-20.

43384. Nematopora lineata (Billings). Plesiotype and figured sections.

Anticosti (Sil.). Anticosti Island, Gulf of St. Lawrence. Ulrich, Geol. Surv. Ill., VIII, 1890, p. 646, pl. 29, figs. 7-7e.

43686. Nematopora ovalis Ulrich.

Cotypes.

Trenton (Ord.). Cannon Falls, Minnesota.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XII, 1890, p. 197, figs.
21, 21a-b; Geol. and Nat. Hist. Surv. Minn., Final Rept.,
III, Pt. I, 1893, p. 204, pl. 3, figs. 24, 25.

See Nematopora quadrata.

43385. Nematopora quadrata Ulrich.

Cotypes and figured sections.

Trenton (Ord.). Trenton Falls, New York.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 644, pl. 29, figs. 12-12c.

= Nematopora ovalis.

428. Nemodon sulcatinus (Evans and Shumard). Plesiotypes.

Montana (Cret.). Yellowstone River, near Miles City,

Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 82, pl. 15, figs. 6a, 6b.

22872. Nemodon sulcatinus (Evans and Shumard)? Plesiotypes.
Colorado (Cret.). Upper Kanab Valley, Utah.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 91, pl. 21, fig. 5.

115717. Neocyclotus (Ptychocochlis) bakeri Simpson. Holotype.
Miocene. Bowden, St. Thomas, Jamaica, British West
Indies.

Dall, Proc. U. S. Nat. Mus., XVII, 1894, p. 449, pl. 16, figs. 1, 2.

9873. Nerinea schottii Conrad. Cotypes. Fredericksburg (Lower Cret.). Near mouth of Pecos River, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 158, pl. 14, figs. 3a, 3b.

13411. Nerita californiensis White. Cotypes. Chico (Cret.). Todos Santos Bay, California.
White, Bull. No. 22, U. S. Geol. Surv., 1885, p. 12, pl. 5, figs. 7, 8.

112662. Nerita tampaënsis Dall. Holotype and paratypes. 112663. Oligocene. Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II. 1892, p. 421, pl. 17, fig. 3.

1979. Neritella nebrascensis Meek and Hayden. Cotypes.

Jurassic. Head of Wind River, Wyoming.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1861, p. 444; Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172; XIV, 1864, p. 109, text figs.

= Neritina nebrascensis.

7876. Neritina (Neritella) bannisteri Meek. Cotypes. 12487. Montana (Cret.). Coalville, Utah.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 499.

7876. Neritina bannisteri (Meek). Cotypes. 12487. Montana (Cret.). Coalville, Utah.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 25, pl. 12, figs. 10-10c.

12504. Neritina (Velatella) baptista White. Holotype.

Laramie (Cret.). Black Buttes Station, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 89, pl. 29, figs. 6a, 6b; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 458, pl. 23, figs. 16, 17.

7872. Neritina (Dostia?) bellatula Meek.

Holotype.

Cretaceous. Coalville, Utah.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 497.

=Neritina (Velatella) bellatula.

7872. Neritina (Velatella) bellatula (Meek). Holotype. Montana (Cret.). Coalville, Utah.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883,
p. 27, pl. 12, figs. 8a, 8b; Third Ann. Rept. U. S. Geol. Surv.,
1883, p. 458, pl. 5, figs. 8, 9.

See Neritina (Dostia?) bellatula.

11558. Neritina bruneri White.

Holotype.

Laramie (Cret.). Valley of the South Platte, Colorado.

White, Proc. U. S. Nat. Mus., V, 1882, p. 95, pl. 4, figs. 7, 8; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 459, pl. 23, figs. 14, 15.

7873. Neritina (Dostia?) carditoides Meek.

Holotype.

Montana (Cret.). Coalville, Utah.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 499.

= Neritina (Velatella) carditoides.

7873. Neritina (Velatella) carditoides (Meek). Holotype.
Montana (Cret.). Coalville, Utah.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883,
p. 28, pl. 12, fig. 7a; Third Ann. Rept. U. S. Geol. Surv., 1883,
p. 458, pl. 5, fig. 10.

See Neritina (Dostia?) carditoides.

8632. Neritina (Velatella) carditoides (Meek). Plesiotypes.
Montana (Cret.). South of Last Bluff, Utah.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 189, pl. 18, figs. 7a-7c.

112664. Neritina chipolana Dall.

Holotype.

Oligocene. Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 422, pl. 23, fig. 19.

112666. Neritina (Theodoxus?) edentula Dall. Holotype and paratypes.

Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 422, pl. 19, fig. 11.

8093. Neritina incompta White.

Holotype.

Colorado? (Cret.). Sulphur Creek, near Hilliard Station, Wyoming.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879, p. 308, pl. 7, figs. 6a-6c.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 128, pl. 28, figs. 4, 5.

163751. Neritina (Smaragdia) merida Dall. Holotype. Pliocene. Shell Creek, De Soto County, Florida.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 60, fig. 5.

12485. Neritina naticiformis White. Cotypes. Bear River (Cret.). Sulphur Creek, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883,
p. 89, pl. 30, figs. 3a, 3b; Third Ann. Rept. U. S. Geol. Surv.,
1883, p. 458, pl. 7, figs. 5, 6.

12485. Neritina naticiformis White. Cotypes and plesiotypes.
23119. Bear River (Cret.). Sulphur Creek, and twenty miles north of Cokeville, Wyoming.

White, Bull. No. 128, U. S. Geol. Surv., 1895, p. 49, pl. 6, figs. 10-12.

1979. Neritina nebrascensis (Meek and Hayden). Holotype.

Jurassic. Head of Wind River, Wyoming.

White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 457, pl. 3, figs. 10, 11; Bull. No. 29, U. S. Geol. Surv., 1886, p. 23, pl. 4, fig. 16.

See Neritella nebrascensis.

7888. Neritina (Dostia?) patelliformis Meek. Cotypes. 8094. Colorado (Cret.). Coalville, Utah.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 498.

= Neritina (Velatella) patelliformis.

8094. Neritina (Velatella) patelliformis (Meek). Cotypes. Colorado (Cret.). Coalville, Utah.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879, p. 309, pl. 7, figs. 7a-d.

See Neritina (Dostia?) patelliformis.

7888. Neritina (Velatella) patelliformis Meek. Cotypes and plesiotypes.

Colorado (Cret.). Coalville, Utah, and Bear River City, Wyoming.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 128, pl. 28, figs. 6-10.

See Neritina (Dostia?) patelliformis.

8092. Neritina (Velatella) patelliformis weberensis White.

Cotypes.

Colorado (Cret.). Coalville, Utah.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879, p. 309, pl. 7, figs. 8a, 8b.

8587. Neritina? phasiolaris White. Cotypes.

Jurassic. Salt Creek near Nephi, Utah.

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 1874.
p. 24; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 167, pl. 13, figs. 1a-d.

7884. Neritina pisiformis Meek.

Cotypes.

Colorado (Cret.). Coalville, Utah.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 500.— White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 26, pl. 12, figs. 9a-c.

= Neritina pisum.

7883. Neritina (Neritella) pisum Meek.

Holotype.

Colorado (Cret.). Coalville, Utah.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 500. See Neritina pisiformis.

7883. Neritina pisum (Meek).

Holotype.

Colorado (Cret.). Coalville, Utah.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879, p. 308, pl. 7, figs. 11a-c.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 127, pl. 28, figs. 1-3.

See Neritina pisiformis.

22309. Neritina stantoni White.

Cotypes.

Bear River (Cret.). Sage Station, and twenty miles north of Cokeville, Wyoming.

White, Bull. No. 128, U. S. Geol. Surv., 1895, p. 49, pl. 6, figs. 16-18.

8198. Neritina volvilineata White.

Cotypes.

Laramie (Cret.). Black Buttes Station, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 88, pl. 21, figs. 6a, 6b; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 458, pl. 23, figs. 12, 13.

115616. Neritina woodwardi Guppy.

Cotypes.

Miocene. Jamaica, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 291, pl. 18, figs. 4, 5.

28946. Neritina wyomingensis Stanton.

Holotype.

Jurassic. Three miles southeast of Gravel Peak, Yellowstone National Park.

Stanton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 629, pl. 75, figs. 4, 5.

109269. Neverita coënsis Dall.

Holotype.

Miocene. Coe's Mill Run, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 60, fig. 19.

111649. Neverita duplicata (Say).

Plesiotype.

Miocene. Shiloh and Jericho, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 121, pl. 2 figs. 13-16.

43781. Nicholsonella cumulata Ulrich. Cotypes and figured sections.

Richmond (Ord.). Wilmington, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 423, pl. 33, figs. 6b, 6c.

43550. Nicholsonella laminata Ulrich. Holotype and figured sections.

Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 315, pl. 21, figs. 15-19, 21.

43392. Nicholsonella ponderosa Ulrich. Holotype and figured sections.

Stones River (Ord.). Dixon, Illinois.

Ulrich, Geol. Surv. Ill., 1890, p. 422, pl. 34, figs. 5-5d.

43551. Nicholsonella ponderosa Ulrich? Plesiotypes. Stones River (Ord.). Minneapolis, Minnesota.

> Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 316, pl. 21, figs. 13, 14, 20, 22.

43552. Nicholsonella pulchra Ulrich. Cotypes and figured sections. Stones River (Ord.). Murfreesboro, Tennessee.

> Ulrich, Geol. and Nat. Hist. Surv., Final Rept., III, Pt. I, 1893, p. 314, pl. 21, figs. 8-12.

41913. Nileus vigilans (Meek and Worthen). Plesiotypes. Trenton (Ord.). Pleasant Grove, Minnesota.

> Clarke, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 712, figs. 17-19.

113282. Niso lineata (Conrad). Plesiotype. Miocene. Cape Fear River, North Carolina.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 245, pl. 20, fig. 4.

112107. Niso willcoxiana Dall.

Cotypes. Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 160, pl. figs. 5, 5b.

9887. Nodosaria texana Conrad. Cotypes. Washita (Lower Cret.). Between El Paso and Frontera, Texas.

> Conrad. Rept. U. S. Mexican Bond, Surv., Emory, I, Pt. II, 1857. p. 159, pl. 14, figs. 4a-c.

21103. Nostoceras helicinum (Shumard). Plesiotypes. Navarro (Cret.). Chatfield, Navarro County, Texas. Hyatt, Proc. Amer. Philos. Soc., XXXII, 1894, p. 573.

23280. Nostoceras stantoni aberrans Hyatt. Cotypes. Navarro (Cret.). Chatfield, Navarro County, Texas. Hyatt, Proc. Amer. Philos. Soc., XXXII, 1894, p. 572.

- Nostoceras stantoni prematurum Hyatt. Holotype.
  Navarro (Cret.). Chatfield, Navarro County, Texas.

  Hyatt, Proc. Amer. Philos. Soc., XXXII, 1894, p. 572.
- 23278. Nostoceras stantoni retrorsum Hyatt. Cotypes.
  Navarro (Cret.). Chatfield, Navarro County, Texas.
  Hyatt, Proc. Amer. Philos. Soc., XXXII, 1894, p. 570.
- 24657. Nothozoe? vermontana Whitfield. Plesiotype.
  Lower Cambrian. Bennington, Vermont.

  Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 628, pl. 80, figs. 4-4b.
- 3640. Nucula abrupta Dana. Holotype.
  Carboniferous. Wollongong Point, Illawarra, New South
  Wales, Australia.

  Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 698, Atlas, pl. 7,
  figs. 3, 3a.
- 7607. Nucula (?) anodontoides Meek. Cotypes.
  Upper Carboniferous. Monongalia County, West Virginia.
  Meek, Third Rept. Regents West Virginia Univ., 1870–1871, p. 71.
- Pliocene. Matura, Trinidad, West Indies.

  Guppy, Proc. Sci. Assoc. Trinidad, 1867, p. 174; ibid., 1882,
  p. 171, pl. 7, fig. 12; Geol. Mag., London, Dec. II, I, 1874,
  p. 443, pl. 18, fig. 7.
  - 6505. Nucula beyrichi von Schauroth? Plesiotypes.
    Upper Carboniferous. Nebraska City, Nebraska.

    Meek, Final Rept. U. S. Geol. Surv. Nebraska (Hayden), 1872,
    p. 203, pl. 10, fig. 18.
  - 434. Nucula cancellata Meek and Hayden. Holotype and paratypes.

    Fox Hills (Cret.). Moreau River, South Dakota, and Deer Creek, North Platte, Wyoming.

    Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 85.—Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 102, pl. 28, figs. 13 (a, c), d, e.
- 136098. Nucula chipolana Dall. Holotype. Oligocene. Calhoun County, Florida.
   Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 575, pl. 32, fig. 10.
- 22876. Nucula coloradoensis Stanton. Holotype-Colorado (Cret.). Williams Creek, Huerfano P. Colorado.

  Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 94, pl. 21, fi

3635. Nucula concinna Dana. Holotype. Carboniferous. Harpers Hill on the Hunter, New South Wales, Australia.

> Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 699, Atlas, pl. 7. fig. 4.

107401. Nucula (Acila) cordata Dall. Holotype. Miocene. Near Mist, Columbia County, Oregon.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 573, pl. 40, fig. 4.

107402. Nucula (Acila) decisa (Conrad). Plesiotypes. Eocene. Pittsburg, Oregon.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 573, pl. 40, figs. 1, 3.

164887. Nucula (Acila) decisa (Conrad). Plesiotype. Eocene. Chicagof Cove, Alaska.

Dall, Harriman Alaska Exped., IV, 1904, p. 105, pl. 9, fig. 2.

323. Nucula equilateralis Meek and Hayden. Holotype. Fort Pierre (Cret.). Moreau River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 84. = Nuculana? equilateralis.

307. Nucula evansi Meek and Hayden. Holotype and paratypes. Fox Hills (Cret.). Moreau River, South Dakota.

> Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 84. = Yoldia evansi.

23047. Nucula gabbi Stanton.

Holotype.

Knoxville (Lower Cret.). Three miles south of Lowerys, Tehama County, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 51, pl. 6, figs. 11, 12.

3490. Nucula impressa Conrad. Miocene. Astoria, Oregon.

3491.

Cotypes.

Conrad, Wilkes U. S. Expl. Exped., X, 1849, p. 726, Atlas, pl. 18, figs. 7c-e.

14376. Nucula insularis Walcott. Cotype. Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 241, pl. 20, fig. 14.

24333. Nucula kayseri Clarke. Holotype. Middle Devonian. Ereré, Brazil.

Clarke, Archivos do Mus. Rio de Janeiro, X, 1899, p. 70, pl. S,

14379. Nucula levatiforme Walcott. Cotype. Lower Carboniferous. Eureka District, Nevada.

> Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 241, pl. 22, figs. 1, 1a.

351. Nucula obsoletistriata Meek and Hayden. Holotype. Fort Pierre (Cret.). Great Bend of Missouri, below Fort Pierre, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 275 (as N. obsoletastriata).—Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 100, pl. 15, figs. 10c, 10d.

8231. Nucula perumbonata White. Holotype. Upper Carboniferous. Wild Band Pockets, Arizona.

White, Bull. No. 5, U. S. Geol. Surv. Terr., 1879, p. 217; Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1880, p. 136, pl. 34, figs. 7a, 7b.

436. Nucula planimarginata Meek and Hayden. Holotype and 437. paratype.

Fox Hills (Cret.). Moreau River, South Dakota, and Long Lake, North Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 85 (as N. planomarginata).—Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 101, pl. 15, figs. 8a, 8b; pl. 28, fig. 16.

Fort Pierre (Cret.). Cheyenne River, ten to fifteen miles west of Beaver Creek, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 406, pl. 11, figs. 5, 6.

111607. Nucula proxima Say.

Plesiotype.

Miocene. Shiloh, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 50, pl. 7, figs. 7-10.

136118. Nucula prunicola Dall.

Holotype.

Miocene. Plum Point, Maryland.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 576, pl. 32, fig. 9.

13900. Nucula rescuensis Walcott. Cotypes.
Upper Devonian. Rescue Hill, Eureka District, Nevada.
Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 172, pl. 15, fig. 9.

302. Nucula scitula Meek and Hayden. Holotype and paratypes. Fox Hills (Cret.). Long Lake, North Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 84. = Yoldia scitula.

107330. Nucula shaleri Dall.

Cotypes.

Miocene. Gay Head, Massachusetts.

Dall, Amer. Journ. Sci. (3), XLVIII, 1894, p. 298; Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 575, pl. 40, fig. 6.

136000. Nucula sinaria Dall.

Holotype.

Miocene. St. Marys River, Maryland.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 575, pl. 32, fig. 7.

23048. Nucula storrsi Stanton. Cotypes.

Knoxville (Lower Cret.). Three miles north of Paskenta, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 52, pl. 6, figs. 13, 14.

352. Nucula subplana Meek and Hayden. Holotype.
Montana (Cret.). Yellowstone River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 85.— Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 99, pl. 17, figs. 7a, 7b.

114951. Nucula taphria Dall. Holotype.

Miocene. Natural Well, Duplin County, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 576, pl. 32, fig. 14.

6504. Nucula ventricosa Hall. Plesiotype.
Upper Carboniferous. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Nebr. (Hayden), 1872, p. 204, pl. 10, figs. 17a-c.

115562. Nucula vieta Guppy.

Holotype.

Pliocene. Matura, Trinidad.

Guppy, Proc. Sci. Assoc. Trinidad, 1867, p. 174; Geol. Mag., London, Dec., II, I, 1874, p. 443, pl. 18, fig. 8; Proc. Sci. Assoc. Trinidad, 1882, p. 171, pl. 7, fig. 11.

6491. Nuculana bellistriata attenuata Meek. Cotypes. Upper Carboniferous. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Nebraska (Hayden), 1872, p. 206, pl. 10, figs. 11a, 11b.

1948. Nuculana bisulcata (Meek and Hayden). Holotype.
Fort Pierre (Cret.). Deer Creek, North Platte, Wyoming.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 104, pl. 15, figs. 4a, 4b.

=Leda bisulcata.

12265. Nuculana bisulcata (Meek and Hayden). Plesiotype.

Montana (Cret.). Near Box Elder Creek, and East Fork
of Beaver Creek, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 407, pl. 11, fig. 7.

=Leda bisulcata.

323. Nuculana? equilateralis (Meek and Hayden). Holotype.
Fort Pierre or Fox Hills (Cret.). Moreau River, South
Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 106, pl. 15, figs. 7a, 7b.

See Nucula equilateralis.

8122. Nuculana inclara White.

Cotypes.

Laramie? (Cret.). Danforth Hills, northwestern Colorado.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 60, pl. 25, fig. 7a.

8062. Nuculana obesa White.

Cotypes.

Upper Carboniferous. Wild Band Pockets, Arizona.

White, Bull. No. 5, U. S. Geol. Surv. Terr., 1879, p. 216; Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1880, p. 136, pl. 34, figs. 2a-2c.

305. Nuculana subnasuta (Hall and Meek). Plesiotype.
Fort Pierre (Cret.). Great Bend of Missouri, below Fort
Pierre, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 105, pl. 15, fig. 9.

24337. Nuculites ererensis Hartt and Rathbun. Cotype.

Middle Devonian. Ereré, Para, Brazil.

Hartt and Rathbun, Ann. Lyceum Nat. Hist. N. Y., XI, 1875, p. 120.

24328. Nuculites nyssa Hall.

Plesiotypes.

Middle Devonian. Ereré, Para, Brazil.

Hartt and Rathbun, Ann. Lyceum Nat. Hist. N. Y., XI, 1875, p. 119.

= Nuculites nyssa majora.

24329. Nuculites nyssa majora Clarke.

Holotype.

Middle Devonian. Ereré, Brazil.

Clarke, Archivos do Mus. Rio de Janeiro, X, 1899, p. 72, pl. 8, fig. 9.

See Nuculites nyssa.

14177. Nuculites triangulus Hall and Whitfield. Holotype.
Upper Devonian. Near Eberhardt Mill, White Pine District. Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 248, pl. 3, figs. 12, 13.

46315. Nuculites yoldiaformis Ulrich.

Holotype.

Utica (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 24, pl. 7, fig. 20.

=Technophorus yoldiiformis.

25696. Nuttainia sparsa Eaton.

Plastotype.

Middle Devonian. Coeymans, Albany County, New You

Green, Mon. Trilobites N. America, Phila., 1832, p. 89.

= Homalonotus dekayi.

See Dipleura dekayi.

13896. **Nyassa parva** Walcott. Cotypes. Middle and Upper Devonian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 173, pl. 15, figs. 14, 14a.

24554. Obolella? ambigua Walcott. Cotypes.

Lower Pogonip (Cambrian). Ridge east of Hamburg

Mine, Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 67, pl. 1, figs. 2a-2c.

=Elkania ambigua.

18322. Obolella atlantica Walcott.

Cotype.

Lower Cambrian. Conception Bay, Newfoundland.

Walcott, Proc. U. S. Nat. Mus., XII, 1889, p. 36; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 611, pl. 71, figs, 1-1c.

14891. Obolella chromatica Billings. Plesiotype. Lower Cambrian. L'Anse au Loup, Labrador.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 112, pl. 11, figs. 1-1b; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 611, pl. 71, figs. 2-2b.

14892. Obolella circe Billings. Plesiotype.

Lower Cambrian. Trois Pistoles, Quebec, Canada.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 118, pl. 10, figs. 3, 3a; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 611, pl. 71, figs. 3, 3a.

15347. Obolella crassa (Hall).

Plesiotype.

Lower Cambrian. Troy, New York.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 114, pl. 10, figs. 1a, 1c, 1e; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 612, pl. 71, figs. 4a, 4c, 4e.

24555. Obolella discoidea Hall and Whitfield. Cotypes. Upper Cambrian. Eureka District, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 205, pl. 1, figs. 1, 2.—Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 14.

35264. Obolella (Glyptias) favosa Linnarsson. Plesiotypes.
Lower Cambrian. Vestergotland, Bithingen, Sweden.
Walcott, Proc. U. S. Nat. Mus., XXIII, 1901, p. 675.

Walcott, 110tl 01 bi 11ab 11ab, 11ab, 17ab, 17ab, 17ab

14889. Obolella gemma Billings. Plesiotype.

15349. Lower Cambrian. Troy, New York, and Bic Harbor,
Quebec, Canada.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 116, pl. 10, figs. 2, 2b-2e; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 612, pl. 71, figs. 5-5c.; pl. 72, figs. 2, 2a.

=Bicia gemma.

35262. Obolella lindstromi Walcott.

Cotypes.

35263. Lower Cambrian. Bjorkelunda, south of Simrishamr, and Sularp, near Lund, Sweden.

Walcott, Proc. U. S. Nat. Mus., XXIII, 1901, p. 674.

35261. Obolella mobergi Walcott.

Cotypes.

Lower Cambrian. Bjorkelunda, Sweden.

Walcott, Proc. U. S. Nat. Mus., XXIII, 1901, p. 673.

1025. Obolella nana Meek and Hayden. Cotypes.
Upper Cambrian. Central portions of Black Hills, South
Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila. for 1861, p. 435; American Jour. Sci. (2), III, 1862, p. 73, figs. I, 2; Pal. Upper Missouri, Smith. Contrib. to Knowl., Vol. XIV, 1864, p. 4, pl. I, figs. 3-3d.

= Dicellomus nanus.

24594. Obolella nana Meek and Hayden.

Plesiotypes.

Upper Cambrian. Headwaters of Red Canyon Creek, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 340, pl. 2, figs. 14-16.

=Dicellomus nanus.

15353. Obolella nitida Ford.

Plesiotype.

Lower Cambrian. Troy, New York.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 118, pl. 11, fig. 2; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 612, pl. 72, fig. 1.

24593. Obolella polita (Hall).

Plesiotypes.

Upper Cambrian. Head of Redwater Canyon, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 339, pl. 2, figs. 12, 13.

=Lingulepis prima.

35206. Obolus (Lingulepis) acuminatus meeki Walcott.

Cotypes.

Flathead (Middle Cambrian). Crowfoot section, Gallatin Range, Yellowstone National Park.

Walcott, Mon. U. S. Geol. Surv., XXXII, Pt. II, 1899, p. 444, pl. 60, figs. 1, 1a.

35240. Obolus (Lingulella) acutangulus Roemer. Plesiotypes. Upper Cambrian. Llano County, Texas.

Walcott, Proc. U. S. Nat. Mus., XXI, 1898, pp. 392-4, 420, pl. 27, fig. 6; pl. 28, figs. 1, 2.

35241. Obolus (Lingulella) amplus Owen.

Ple

Middle Cambrian. Dakota, Minnesota.

Walcott, Proc. U. S. Nat. Mus., XXI, 1898, pp. 392, pl. 28, figs. 3, 4.

27302. Obolus anceps Walcott. Cotypes.

Lower Pogonip (Cambrian). Adams Hill, Eureka District, Nevada.

Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 388.

35238. Obolus apollinis Eichwald. Plesiotypes. Upper Cambrian. Near Reval, Russia.

Walcott, Proc. U. S. Nat. Mus., XXI, 1898, pp. 385, 391, 420, pl. 26, figs. 3-6.

27305. Obolus (Lingulella) argutus Walcott. Cotypes.
Upper (?) Cambrian. Schellbourne, Schell Creek Range,
Nevada.

Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 396.

35293. Obolus (Lingulella) atavus Matthew. Plesiotypes.
Middle Cambrian. Dougal Brook, branch of Indian
River, Cape Breton, Nova Scotia.

Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 609.

27306. Obolus (Lingulella) auga Walcott. Cotypes.

Middle Cambrian. Shooks Gap in Bays Mountain, ten
miles east of Knoxville, Tennessee.

Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 396.

27309. Obolus (Lingulella) bellulus Walcott. Cotypes.
Upper Cambrian. Little Bell Island, Conception Bay,
Newfoundland.

Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 398.

27307. Obolus (Lingulella) bellus Walcott. Cotypes.
 27308. Upper Cambrian. Little Bell and Great Bell islands, Conception Bay, Newfoundland.

Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 397.

- Obolus (Lingulella) bellus Walcott, 1901=Obolus (Lingulella) lens Matthew.
- 35259. Obolus (Lingulella?) bicensis Walcott. Holotype.
  Lower Cambrian. Bic Harbor, Province of Quebec,
  Canada.

Walcott, Proc. U. S. Nat. Mus., XXIII, 1901, p. 688.

35295. Obolus (Lingulella) canius Walcott. Cotypes.
Middle Cambrian. McLeans Brook, near Marian Bridge,
Cape Breton, Nova Scotia.

Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 610.

35237. Obolus (Lingulella) celatus Volborth. Plesiotypes. Upper Cambrian. Jegelecht, near Reval, Russia.

Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 385, 420, pl. 26, figs. 1, 2.

27310. Obolus (Lingulella) chuarensis Walcott. Cotypes.
Middle Cambrian. Head of Nunkoweap and Chuar Valleys, Grand Canyon, Arizona.

Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 399.

35294. Obolus (Lingulella) collicia Matthew. Plesiotypes.
Middle Cambrian. Dougal Brook, Branch of Indian
River, Cape Breton, Nova Scotia.

Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 610.

35239. Obolus (Lingulella) davisi McCoy. Plesiotype. Lingula Flags (Upper Cambrian). Port Madoc, North Wales.

Walcott, Proc. U. S. Nat. Mus., XXI, 1898, pp. 391-4, 420, pl. 27, figs. 1-5.

27311 Obolus (Lingulella) desideratus Walcott. Cotypes.
to Upper Cambrian and Lower Ordovician. Crowfoot Sec27313. tion, Gallatin Range, Wyoming; Hamburg Mine,
Eureka District, Nevada.

Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 399.

35207. Obolus (Lingulella) desideratus Walcott. Cotypes.
Gallatin (Upper Cambrian). Crowfoot section, Gallatin
Range, Yellowstone National Park.

Walcott, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 445, pl. 60, figs. 2, 2a.

27314. Obolus (Lingulella) dubius Walcott. Cotypes.

Middle Cambrian. Chisholm Mine, Ely Mountains, near
Pioche, Nevada.

Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 401.

- 35242. Obolus (Lingulella) ella Hall and Whitfield. Plesiotypes.
- 35243. Middle Cambrian. East Canyon, Oquirrh Mountains, Utah, near Pioche, Nevada, and near Helena, Montana.

Walcott, Proc. U. S. Nat. Mus., XXI, 1898, pp. 390, 420, pl. 28, figs. 5-8.

- 27315. Obolus (Lingulella) ellsi Walcott. Cotypes.
  Upper Cambrian. Chaudiere River, Quebec, Canada.
  Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 402.
- 27316. Obolus (Lingulella) euglyphus Walcott. Cotypes.
  Middle Cambrian. Head of Lava and Nunkoweap Valleys,
  Grand Canyon, Arizona.

Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 402.

35296. Obolus (Westonia) finlandensis Walcott. Co Middle Cambrian. Aland Saltvik, Finland. Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 611. 27317. Obolus (Lingulella) fragilis Walcott. Cotypes.

Middle Cambrian. Manuels Brook, Conception Bay, Newfoundland.

Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 404.

27318. Obolus(Lingulella) franklinensis Walcott. Cotypes.
Middle (?) Cambrian. Near Georgia, Vermont.
Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 404.

27319. Obolus (Lingulella) hayesi Walcott. Cotypes.

Middle Cambrian. Coosa Valley, Cherokee County, Alabama.

Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 405.

27320. Obolus (Lingulella) helena Walcott. Cotypes.

Middle Cambrian. Near Helena, Montana.

Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 406.

27321. Obolus (Lingulella) ino Walcott. Cotypes.

Middle Cambrian. Two and one-half miles south of Rome, Georgia.

Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 406.

27322. Obolus (Lingulella) lamborni minimus Walcott.

Upper Cambrian. Three and one-half miles south-southwest of Rogersville, Tennessee.

Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 407.

27307. Obolus (Lingulella) lens Matthew. Plesiotypes.
 27308. Upper Cambrian. Little and Great Belle Islands, Conception Bay, Newfoundland.

Walcott, Proc. U. S. Nat. Mus., XXIII, 1901, p. 685 (as O. (L.) bellus); ibid., XXV, 1902, p. 606.

27323. Obolus (Lingulella) leos Walcott. Cotypes.
Upper Cambrian. One and one-half miles south of Rome,
Georgia.

Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 407.

27324 Obolus (Lingulella) lineolatus Walcott. Cotypes.
to Middle Cambrian. Head of Chuar, Kwagunt, and Nunko27326. weap canyons, Grand Canyon, Arizona.
Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 408.

35257. Obolus (Lingulella) linnarssoni Walcott. Holotype. Middle Cambrian. Lovened, Westrogothia, Sweden. Walcott, Proc. U. S. Nat. Mus., XXIII, 1901, p. 688.

27303. Obolus loperi Walcott.

Cotypes.

Transition Cambrian to Ordovician. Cement Creek, three miles north of Hot Springs, Colorado.

Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 389.

27299. Obolus mickwitzi Walcott. Cotypes.
Middle Cambrian. Hudson, Wisconsin.
Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 386.

- 27327. Obolus (Lingulella) mosia osceola Walcott. Cotypes.
  Upper Cambrian. Osceola Mills, Wisconsin.
  Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 409.
- 27304. Obolus namouna Walcott. Cotypes.
  Middle Cambrian. Eau Claire, Wisconsin.
  Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 390.
- 27328. Obolus (Lingulella) nanno Walcott. Cotypes.
  Middle Cambrian. Bluntsville Valley, Alabama.
  Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 409.
- 27329. Obolus (Lingulella) oweni Walcott. Cotypes.
  27330. Upper Cambrian. Gibraltar Bluff, near Lodi, Prairie du Sac, and Osceola Mills, Wisconsin.
  Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 410.
- 27301. Obolus pandemia Walcott. Cotypes.

  Middle Cambrian. Shooks Gap, Bays Mountain, ten miles
  east of Knoxville, Tennessee.

  Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 388.
- 24592. Obolus pectenoides Whitfield. Cotypes.
  Upper Cambrian. Castle Creek, Black Hills, South Dakota.
  Whitfield, Ludlow's Rept. Reconn. Black Hills Dakota, 1875,
  p. 103, figs. 1-3; Rept. Geol. and Resources Black Hills
  Dakota, 1880, p. 338, pl. 2, figs. 18, 19.
- 27331. Obolus (Lingulella) phaon Walcott. Cotypes.
  Middle Cambrian. Eau Claire, Wisconsin.
  Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 410.
- 27332. Obolus (Lingulella) pogonipensis Walcott. Cotypes.
  Base of Pogonip (Ord.). East of Hamburg Ridge, Eureka
  District, Nevada.

  Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 411.
- 27333. Obolus (Lingulella) prindlei Walcott. Cotypes.
   27334. Lower Cambrian. One mile southwest of Wynantskill and five miles east of Albany, Rensselaer County, New York.
   Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 412.
- 27335. Obolus (Lingulella) punctatus Walcott. Cotyp Middle Cambrian. Eureka District, Nevada. Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 412.

35208. Obolus (Lingulella) randomensis Walcott. Cotypes.
Upper Cambrian. Random Island, Smith Sound, Trinity
Bay, Newfoundland.

Walcott, Proc. U. S. Nat. Mus., XXIII, 1901, p. 688.

- 27300. Obolus rhea Walcott.

  Middle Cambrian. Eau Claire, Wisconsin.

  Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 387.
- 27336. Obolus (Lingulella) rogersi Walcott. Cotypes.

  Lower Ordovician. Narragansett Bay, Rhode Island.

  Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 413.
- 27337. Obolus (Lingulella) rotundatus Walcott. Cotypes.
   27338. Upper Cambrian and Lowest Ordovician. Schellbourne, Schell Creek Range, Nevada; west of Bear Creek, and south of Gallatin Valley, Montana.
   Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 415.
- 35229. Obolus (Acritis?) rugatus Walcott. Holotype.
  Upper portion of Middle Cambrian. Secret Canyon, Eureka
  District, Nevada.
  Walcott, Proc. U. S. Nat. Mus., XXIII, 1901, p. 694.
- 35291. Obolus (Lingulella) schmalensei Walcott. Cotypes.
  Middle Cambrian. Skane, Andrarum, Sweden.
  Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 605.
- 35258. Obolus (Lingulella) siemiradzkii Walcott. Cotypes.

  Middle Cambrian. Pepper Mountains, near Sandomir on the Vistula, Russian Poland.

  Walcott, Proc. U. S. Nat. Mus., XXIII, 1901, p. 690.
- 27339. Obolus (Lingulella) similis Walcott. Cotypes. 27340. Middle Cambrian. Deadwood, Black Hills, South Dakota. Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 415.
- 27341. Obolus (Lingulella) since Walcott. Cotypes.

  Middle Cambrian. Packsaddle Mountain, Llano County,

  Texas.

Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 416.

- 35290. Obolus (Lingulella) spatulus Walcott. Cotypes.
  Tonto (Middle Cambrian). Grand Canyon of the Colorado.
  southeast of Powells Plateau, Arizona.
  Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 607.
- 27342. Obolus (Lingulella) tarpa Walcott. Cotypes.

  Middle Cambrian. One mile east of Postoak Springs.

  Roane County, Tennessee.

  Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 417.

35220. Obolus tetonensis Walcott. Cotypes.

Middle Cambrian. Head of Sheep Creek, Teton Range,
Wyoming.

Walcott, Proc. U. S. Nat. Mus., XXIII, 1901, p. 684.

35292. Obolus (Lingulella) welleri Walcott. Cotypes.
Upper Cambrian. Near Newton, New Jersey.
Walcott, Proc. U. S. Nat. Mus., XXV, 1902, p. 608.

27343 Obolus (Lingulella) willisi Walcott. Cotypes.
to Middle Cambrian. Near Knoxville, Tennessee.
27346. Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 418.

35235. Obolus (Lingulella) winona convexus Walcott. Cotypes.
Upper Cambrian. Osceola Mills, Wisconsin.
Walcott, Proc. U. S. Nat. Mus., XXIII, 1901, p. 691.

27347 Obolus (Lingulella) zetus Walcott. Cotypes.
Upper Cambrian. Head of Nunkoweap Valley, Grand
Canyon, Arizona.

Walcott, Proc. U. S. Nat. Mus., XXI, 1898, p. 419.

35256. Obolus (?) zoppi Walcott. Cotypes.

Lower Cambrian. Canalgrande, Sardinia.

Walcott, Proc. U. S. Nat. Mus., XXIII, 1901, p. 684.

Pliocene. Near Fort Deneaud, Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 150.

162543. Ocinebra keepi Arnold. Holotype.
Pleistocene. San Pedro, California.

Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 256, pl. 5, fig. 9.

162544. Ocinebra lurida cerritensis Arnold. Holotype.
Pleistocene. Crawfish George's, San Pedro, California.
Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 258, pl. 5, fig. 5.

41701. Octonaria clavigera Ulrich. Holotype.
Onondaga (Dev.). Falls of the Ohio.
Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 195, pl.
16, figs. 7a-c.

41674. Octonaria curta Ulrich. Holotype.
Rochester (Sil.). Lockport, New York.
Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 195, pl
12, figs. 4a, 4b.

41707. Octonaria ovata Ulrich.

Holotype.

Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 194, pl. 16, figs. 6a, 6b.

41705. Octonaria stigmata Ulrich.

Holotype.

Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 193, pl. 16, figs. 8a, 8b.

41704. Octonaria stigmata loculosa Ulrich.

Holotype.

Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 194, pl. 16, fig. 10.

41706. Octonaria stigmata oblonga Ulrich.

Holotype.

Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 194, pl. 16, figs. 9a-c.

155114. Oculina alabamensis Vaughan.

Cotypes.

158249. Chickasawan (Eocene). Greggs Landing, Alabama.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 121, pl. 12, figs. 4-7.

158253. Oculina aldrichi Vaughan.

Holotype.

Red Bluff (Oligocene). Byrams Ferry, Mississippi.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 123, pl. 12, figs. 8, 8a.

158251. Oculina harrisi Vaughan.

Holotype.

Red Bluff (Oligocene). Red Bluff, Mississippi.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 122, pl. 12, figs. 9, 9a.

158245. Oculina mississippiensis (Conrad). Plesiotypes. Vicksburgian (Oligocene). Vicksburg, Mississippi.

Vaughan Mon XXXIV I'S Gool Surv. toxy p. 118

Vaughan, Mon. XXXIX, U.S. Geol. Surv., 1900, p. 118, pl. 11, figs. 3-7, 11, 11a.

157515. Oculina singleyi Vaughan.

Cotypes.

Claibornian (Eocene). Smithville, Texas.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 120, pl. 12, figs. 1-3a.

158254. Oculina (?) smithi Vaughan.

Cotypes.

Midway (Eocene). Prairie Creek, Alabama.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 123, pl. 12, figs. 10-11.

158235. Oculina vicksburgensis (Conrad). Plesiotypes.

Vicksburgian and Red Bluff (Oligocene). Vicksburg, Mississippi.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 116, pl. 10, figs. 8-10.

- 9045. Odontobasis buccinoides White. Cotypes.

  Montana (Cret.). Near Point of Rocks Station, Wyoming.

  White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883,
  p. 102, pl. 20, figs. 3a, 3b.
- 1943. Odontobasis constricta (Hall and Meek). Plesiotype. Fox Hills (Cret.). Deer Creek, North Platte, Wyoming.

  Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 352, figs. 41, 42, on p. 353.
- 9046. Odontobasis? formosa White. Holotype.
  Montana (Cret.). Danforth Hills, northwestern Colorado.
  White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p.
  103, pl. 28, fig. 7a.
- Odontostomia (Syrnola) attenuata Dall. Holotype. Pliocene. Cape Fear River, North Carolina.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 252, pl. 13, fig. 8.
- 113302. Odontostomia (Syrnola) caloosaënsis Dall. Cotypes.
  Pliocene. Caloosahatchie River, near Fort Thompson,
  Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 252, pl. 15, fig. 12b.

148631. Odostomia (Chrysallida) diegensis Dall and Bartsch.
Holotype.
Post-Pliocene. San Diego, California.

Dall and Bartsch in Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 284, pl. 1, fig. 8.

148635. Odostomia (Evalea) stearnsii Dall and Bartsch. Holotype. Post-Pliocene. San Diego, California.

Dall and Bartsch in Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 282, pl. 1, fig. 12.

30206. Œcotraustes denticulata Hyatt. Cotypes.

Jurassic. Stanislaus River, opposite Bostwick's bar, California.

Hyatt, Bull. Geol. Soc. Amer., V, 1894, p. 427.

- 15456. Ogygia parabola Hall and Whitfield. Cotypes.
  Middle Cambrian. East Canyon, Oquirrh Mountains, Utah.
  Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II,
  1877, p. 245, pl. 2, fig. 35.

  = Bathyuriscus productus.
- 24606. Ogygia? problematica Walcott. Cotypes.
  Middle Cambrian. Secret and New York Canyons, Eureka
  District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 63, pl. 10, figs. 2a, 2b, 4.

15456. Ogygia producta Hall and Whitfield. Cotypes. Middle Cambrian. East Canyon, Oquirrh Mountains, Utah. Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 244, pl. 2, figs. 31-34.

See Bathyuriscus productus.

15451. Ogygia? spinosa Walcott.

Holotype.

Middle Cambrian. Secret Canyon, Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 63, pl. 9, fig. 22. = Zacanthoides spinosus.

See Olenoides spinosus.

30205. Olcostephanus lindgreni Hyatt.

Holotype.

Jurassic. Near Colfax, Placer County, California.

Hyatt, Bull. Geol. Soc. Amer., V, 1894, p. 427.

23089. Olcostephanus (Simbirskites) mutabilis Stanton. Cotypes.

Knowville (Lower Cret.). Five miles north of Paskenta,
California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 77, pl. 15, figs. 1-5.

23090. Olcostephanus (Polyptychites) trichotomus Stanton.

Holoty

Knoxville (Lower Cret.). Two miles south of Lowerys, Tehama County, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 78, pl. 16, fig. 1.

33669. Oldhamia (Murchisonites) occidens Walcott. Cotypes.
Upper Cambrian or Ordovician. Nassau Township, Rensselaer County, New York.

Walcott, Proc. U. S. Nat. Mus., XVI, 1894, p. 314, fig. 1.

15413. Olenellus asaphoides (Emmons). Plesiotype.

Lower Cambrian. Troy, New York.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 168, pl. 17, figs. 3, 5, 6, 10; pl. 25, fig. 8.

See Olenellus (Mesonacis) asaphoides.

15413. Olenellus (Mesonacis) asaphoides (Emmons). Plesiotype.
 18350. Lower Cambrian. Greenwich and Troy, New York.

Walcott, Proc. U. S. Nat. Mus., XII, 1889, p. 41; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 637, pl. 88, figs. 1, 1a, 1e, 1g; pl. 89, figs. 1, 1a; pl. 90, figs. 1, 1a.

See Olenellus asaphoides.

18331. Olenellus (Holmia) bröggeri (Walcott). Cotypes.

Lower Cambrian. Conception Bay, Newfoundland.

Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 638, pl. 91; fig. 1; pl. 92, figs. 1-1h.

See Olenellus (Mesonacis) bröggeri.

18331. Olenellus (Mesonacis) bröggeri Walcott. Cotype.

Lower Cambrian. Conception Bay, Newfoundland.

Walcott, Proc. U. S. Nat. Mus., XII, 1889, p. 41.

See Olenellus (Holmia) bröggeri.

8574. Olenellus gilberti (Meek ms.) White. Cotypes and plesiotype.

15412. Lower Cambrian. Pioche, Prospect Mountain, and High-

15416. land Range, Nevada.

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 1874, p. 7; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1877, p. 44, pl. 2, figs. 3a-3e.—Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 29, pl. 9, figs. 16, 16a; pl. 21, fig. 13; Bull. No. 30, U. S. Geol. Surv., 1886, p. 170, pl. 18, figs. 1-1c; pl. 19, figs. 2-2k; pl. 20, figs. 1-11, 4; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 636, pl. 84, figs. 1-1g; pl. 85, figs. 1-1g; pl. 86, figs. 1-1m, 4.

See Olenellus howelli.

8573. Olenellus howelli (Meek ms.) White. Cotypes and plesiotype.

15412. Lower Cambrian. Pioche, and Prospect Peak, Eureka District, Nevada.

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 1874, p. 8; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1877, p. 47, pl. 2, figs. 4a, 4b.—Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 30, pl. 9, figs. 15–15b; pl. 21, figs. 1–9.

=Olenellus gilberti.

15407. Olenellus iddingsi Walcott.

Cotype.

Lower Cambrian. Prospect Mountain, Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 28, pl. 9, fig. 12;
Bull. No. 30, U. S. Geol. Surv., 1886, p. 170, pl. 19, fig. 1;
Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 636, pl. 84, fig. 2.

15418. Olenellus thompsoni (Hall).

Plesiotype.

15419. Lower Cambrian. Parker's Quarry, Georgia, and two miles east of Swanton, Vermont.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 167, pl. 17, figs. 1, 2, 4, 9; pls. 22, 23, fig. 1; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 635, pl. 82, figs. 1, 1a; pl. 83, figs. 1-1b.

15399. Olenellus (Mesonacis) vermontana (Hall). Plesiotype.

Lower Cambrian. Georgia, Vermont.

Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 637, pl. 87, figs. 1-1b.

= Mesonacis vermontana.

24604. Olenoides curticei Walcott.

Cotypes

Middle Cambrian. Near Blaine, Coosa Valley, Alabam Walcott, Proc. U. S. Nat. Mus., XI, 1888, p. 443, text fig. c p. 444.

18452. Olenoides (Dorypyge) desiderata Walcott. Cotypes. Lower Cambrian. Highgate Springs, Vermont.

> Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 644, fig. 67 on p. 645.

18450. Olenoides ellsi Walcott.

Cotypes.

Lower Cambrian. Near Quebec, Canada.

Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 642, fig. 66 on p. 644.

8563. Olenoides? flagricaudus White. Holotype.

Middle Cambrian. Schellbourne, Schell Creek Range, 15452. Nevada.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 185, pl. 25, fig. 4.

= Zacanthoides flagricaudus.

See Dicellocephalus? flagricaudus.

17450. Olenoides fordi Walcott.

Cotype.

Lower Cambrian. Near North Granville, Washington County, New York.

Walcott, Amer. Journ. Sci. (3), XXXIV, 1887, p. 195, figs. 5, 5b; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 641, pl. 94, figs. 3, 3b, 3c.

15445. Olenoides levis Walcott.

Cotypes.

Lower Cambrian. Pioche, Nevada.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 187, pl. 25, figs. 3, 3a.

= Zacanthoides levis.

15446. Olenoides? marcoui (Whitfield).

Plesiotype. Lower Cambrian. Parker's Quarry, Georgia, Vermont.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 186, pl. 26, figs. 5-5b; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 642, pl. 94. figs. 2-2b.

15453. Olenoides nevadensis (Meek). Holotype.

Middle Cambrian. House Range, Antelope Spring, Utah.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 181, pl. 25, fig. 7. See Paradoxides? nevadensis.

15449. Olenoides quadriceps (Hall and Whitfield). Cotype and plesiotype.

Lower Cambrian. Ute Peak, Utah, and Prospect Peak. Nevada.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 187, pl. 29, figs. 1-1c; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 646. pl. 94, figs. 4-4d.

See Dicellocephalus quadriceps.

15451. Olenoides spinosus (Walcott). Holotype and plesiotype.
Middle Cambrian. Pioche, Nevada.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 184, pl. 25, figs. 6, 6a.

=Zacanthoides spinosus.

See Ogygia? spinosa.

## 15454. Olenoides typicalis Walcott.

Cotype.

Middle Cambrian. Pioche, Nevada.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 183, pl. 25, figs. 2, 2a, 2b.

= Zacanthoides typicalis.

15447. Olenoides wahsatchensis (Hall and Whitfield). Cotype.
Middle Cambrian. Box Elder Canyon, Wahsatch Mountains, Utah.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 189, pl. 29, figs. 2, 2a.

See Dicellocephalus wahsatchensis and D.? gothicus.

111639. Oliva carolinensis (Conrad).

Plesiotype.

Miocene. Jericho, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 109, pl. 19, fig. 8.

113971. Oliva liodes Dall.

Holotype.

Oligocene. Baileys Ferry, Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 58, fig: 1.

Oliva (Omogymna) martensii Dall. Holotype. Oligocene. Baileys Ferry, Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 58, fig. 4.

107090. Oliva plicata Guppy.

Holotype.

Oligocene. Vendryes, Jamaica, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 308, pl. 30, fig. 12.

33076. Olivanites globosus Troost.

Chirotype.

Devonian? Bedford County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 62.

33075. Olivanites verneuillii Troost.

Chirotypes.

Middle Devonian. Falls of the Ohio, and Bedford County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 62.

= Nucleocrinus verneuilli.

Olivella eutacta Dall.

Oligocene. One mile below Baileys Ferry, Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 58, fig. 3.

107089. Olivella Indivisa Guppy. Holotype. Oligocene. Vendryes, Jamaica, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 308, pl. 30, fig. 10.

Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 45, pl. 4, fig. 8b.

45943. Omospira alexandra (Billings). Plesiotypes.
45944. Black River (Ord.). Curdsville, Mercer County, Kentucky.

Stones River (Ord.). Dixon, Illinois.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 946, pl. 70, figs. 66, 67.

45945. Omospira laticincta Ulrich. Holotype. Black River (Ord.). Near Lebanon, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 945, pl. 70, figs. 64, 65.

28196. Oncoceras arcticum Schuchert. Holotype.
Trenton (Ord.). Head of Frobisher Bay, Baffin Land.
Schuchert, Proc. U. S. Nat. Mus., XXII, 1900, p. 172, pl. 14, figs.

28120. Oncoceras tumidum Schuchert. Cotypes.
Trenton (Ord.). Head of Frobisher Bay, Baffin Land.
Schuchert, Proc. U. S. Nat. Mus, XXII, 1900, p. 172, pl. 14, figs.
1-3.

112190. **Opalia de-bouryi** Dall. Holotype. Pliocene. Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 158; Pt. II, 1892, p. 244, pl. 20, fig. 13.

45946. Ophiletina angularis Ulrich and Scofield. Holotype.
Black River (Ord.). Near Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final
Rept., III, Pt. II, 1897, p. 1031, pl. 74, figs. 43-46.

45947. **Ophiletina sublaxa** Ulrich and Scofield. Cotype. Stones River (Ord.). Dixon, Illinois.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1030, pl. 74, figs. 40, 41.

46070. Ophiletina sublaxa depressa Ulrich. Holotype. Stones River (Ord.). Murfreesboro, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., Pt. II. 1897, p. 1030, pl. 74, fig. 42.

45948. Ophiletina sublaxa sequens Ulrich and Scofield. Holotype. Trenton (Ord.). Wykoff, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1031.

7820. Ophioderma? bridgerensis Meek. Holotype.
Cretaceous. Four miles north of Fort Ellis, Montana.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 475, and footnote (also calls it Ophiolepis bridgerensis).—White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 8, pl. 12, fig. 12a.

=Ophioglypha bridgerensis.

7820. Ophioglypha bridgerensis (Meek). Holotype. Cretaceous. Four miles north of Fort Ellis, Montana.

Clark, Bull. No. 97, U. S. Geol. Surv., 1893, p. 29, pl. 4, figs. 2a-b. See Ophioderma? bridgerensis.

21884. Ophioglypha texana Clark. Cotypes. Washita (Lower Cret.). Six miles north of Fort Worth, Texas.

Clark, Bull. No. 97, U. S. Geol. Surv., 1893, p. 30, pl. 4, figs. 1a-c.

- 25490. Ophryastes grandis Scudder. Holotype. Older Tertiary. Roan Mountains, western Colorado. Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 37, pl. 8, fig. 7.
- 25488. Ophryastes petrarum Scudder. Holotype.
  Older Tertiary. Roan Mountains, western Colorado.
  Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 37, pl. 8, fig. 10.
- 25491. Ophryastites cinereus Scudder. Holotype. Florissant (Oligocene). Florissant, Colorado. Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 39, pl. 8, fig. 12.
- 25493. Ophryastites digressus Scudder. Holotype.
  Older Tertiary. White River, western Colorado.
  Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 39, pl. 9, fig. 2.
- 25492. Ophryastites dispertitus Scudder. Holotype. Older Tertiary. Roan Mountains, western Colorado. Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 40, pl. 9, fig. 3.
- 23055. Opis californica Stanton. Cotypes.

  Knoxville (Lower Cret.). Stephenson, Tehama County,
  California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 58, pl. 7, figs. 1-4.

46262. Opisthoptera alternata Ulrich. Cotypes.
Richmond (Ord.). Waynesville, Ohio.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 644, 645, text figs. 9, 11.

- 46263. Opisthoptera ampla Ulrich. Holotype.
  Lorraine (Ord.). Cincinnati, Ohio.
  Ulrich, Geol. Surv. Ohio, VII, 1893, p. 647, pl. 47, fig. 7.
- 46264. Opisthoptera casei (Meek and Worthen). Plesiotypes.
   46265. Richmond (Ord.). Near Lebanon, Marion County, Kentucky; Richmond, Indiana.
   Ulrich, Geol. Surv. Ohio, VII, 1893, p. 643, pl. 49, figs. 1-5.
- 46266. Opisthoptera extenuata Ulrich. Holotype.
  Richmond (Ord.). Warren County, Ohio.
  Ulrich, Geol. Surv. Ohio, VII, 1893, p. 645, text fig. 2a-d.
- 46267. Opisthoptera fissicosta Meek. Plesiotype. Richmond (Ord.). Clarksville, Ohio.

  Ulrich, Geol. Surv. Ohio, VII, 1893, p. 643, pl. 49, fig. 15.
- 46268. Opisthoptera laticostata Ulrich. Holotype.
  Richmond (Ord.). Near Waynesville, Ohio.
  Ulrich, Geol. Surv. Ohio, VII, 1893, p. 646, pl. 47, fig. 6.
- 46269. Opisthoptera notabilis Ulrich. Holotype.
  Lorraine (Ord.). Cincinnati, Ohio.
  Ulrich, Geol. Surv. Ohio, VII, 1893, p. 648, pl. 49, fig. 16.
- 46270. Opisthoptera obliqua Ulrich. Holotype. Richmond (Ord.). Richmond, Indiana.

  Ulrich, Geol. Surv. Ohio, VII, 1893, p. 646, pl. 49, figs. 6-8.
- 43303. Orbignyella lamellosa (Ulrich). Figured section and fragment of holotype.

  Richmond (Ord.). Wilmington, Illinois.

  Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904.
  p. 20, pl. 6, fig. 10.

  See Monticulipora lamellosa.
- 43174. Orbignyella sublamellosa Ulrich and Bassler. Holotype and figured sections.

  Stones River (Ord.). Murfreesboro, Tennessee.

  Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904.
  p. 19, pl. 6, figs. 7-9.
- Orthaulax gabbi Dall.

  Oligocene. Near Baileys Ferry, Chipola River, Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 170, pl. 12, figs. 5, 5a, 5b.
- Orthaulax pugnax (Heilprin). Plesiotypes.
  Oligocene. Ballast Point, Tampa, Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 170, pl. 8, figs. 5, 8.

9826. Orthis arachnoides Hall?

Plesiotype.

Carboniferous? Texas. Exact locality not given.

Hall, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, pl. 20. figs. 3a. 3b.

pl. 20, figs. 3a, 3b.
[Either Schuchertella or Streptorhynchus, possibly of the Lower Carboniferous of the El Paso region, Texas.]

8547. Orthis biforata lynx (Eichwald).

Plesiotypes.

Richmond (Ord.). Silver City, New Mexico.

White, Rept. U. S. Geol. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 74, pl. 4, figs. 9a, 9b.

= Platystrophia lynx.

6835. Orthis carbonaria Swallow.

Plesiotypes.

Upper Carboniferous. Rock Bluff near Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Nebr. (Hayden), 1872, p. 173, pl. 1, figs. 8a-c.

=Rhipidomella pecosi.

See Orthis pecosi.

17887. Orthis disparilis Conrad.

Plesiotype.

Trenton (Ord.). Turkey River, Iowa.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, pl. 2 B, fig. 23.

= Dalmanella testudinaria.

24596. Orthis eurekensis Walcott.

Cotypes.

Middle Cambrian. Secret Canyon, Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, 1 22, pl. 9, figs. 8, 8a.

=Orthis (Orusia?) eurekensis.

17250. Orthis hamburgensis Walcott.

Cotypes.

Upper Pogonip (Ord.). Eureka District, Nevada.

Walcott, Mon.VIII, U. S. Geol. Surv., 1884, p. 73, pl. 11, figs. 5, 5a.

= Dalmanella hamburgensis.

24363. Orthis harttii Rathbun.

Cotypes.

Middle Devonian. Rio Maecuru, Brazil.

Rathbun, Proc. Boston Soc. Nat. Hist., XX, 1878, p. 23.

=Rhipidomella harttii.

15355. Orthis? highlandensis Walcott.

Cotype.

Lower Cambrian. Near Pioche, Nevada.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 119, pl. 8, figs. 3-3b; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 612, pl. 72, figs. 5-5b.

= Billingsella highlandensis.

Orthis hipparionyx Hall.

Oriskany Lower Per . Albany County New York.

Hall Nat Hist New York Pal III 1884 p. 407, pl. 90, fig. 6.

= Hippanionyx proximus.

13787. Orthis impressa Hall. Plesiotype. Middle Peronian. Euroka District. Nevada.

Walcon Mon VIII. U.S. Gerl. Surv. 1882 p. 115, pl. 13, fig. 15. = Schliephoria impressa.

Piesiotypes.

Base of Upper Devotion. Clear Water River. Mackenzie
River Rasin. Canada.

Meek Trans Chongo Anali Sm. I 1966 p. ac pl. 12. figs. 28-b. Probably Orthis Schinophiche striamia. See Orthis lentiformis?

1701% Orthis lentiformis Hall? Plessotype.

Middle Peromian. Near New Buffalt. Lowe.

Owen Rept. Sect. Surv. Wis. Trust and Minn. 1852, pt. 5, figs.

=Voung specimen of Orthis Schlieghoria striatula. See Orthis Sweenes?

tyter. Orthis konensis Walerti.

Upper Pogramy (Vri. Line Mannern Nevalia.

Walerti Man VIII U.S. Seel Sur., 1882 p. 72 pl. 11, figs. 5, 6a.

= Hebertella. 3. konensis.

part Orthis machinianer Meek — Cotypes, again — Rase of Cyren Devintum — Lockhart River and mear Fort — Good Hope — Mackenine River Camada — Meek Draw Chongo And So. 1 1865 p. 85 pl. 12 figs. 14-h. — Schwindowa machinine

estign Orthus Dimorthus meedis article Schmidhert — Conymes. Theorem Ortho — Halph of Frontscher Bay Faiffer Lamid. Schudert Proc. 1 S. Nac. Rus. XXII. (ac., p. 157- pl. 12, figs. 1 S.

274. Orthis michelian nevadenses Neek Coppes

Estate Upper ektrhemienten. With a Fran Commy Nevade.

Meek Reje U.S. Seek Estat. Mat Fin U. Fa I. 1888 p. 19.

ph. 19. hp. ...

#Rhyndrimella remaiense.

b. Orthis musculous Hall Flatterje.
(Ithialum Lower Des Centions Albumy County New York

8546. Orthis occidentalis Hall. Plesiotypes.

Richmond (Ord.). Silver City, New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 70, pl. 4, figs. 11a, 11b.

See Orthis subjugata.

8463. Orthis pecosi Marcou.

Plesiotypes.

Upper Carboniferous. Santa Fé, New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 125, pl. 9, figs. 5a-5e.

= Rhipidomella pecosi.

See Orthis carbonaria.

17235. Orthis perveta Conrad.

Plesiotype.

Upper Pogonip (Ord.). Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 72, pl. 11, figs. 3-b.

= Dalmanella subæquata pervetus.

8553. Orthis plicatella Hall?

Plesiotypes.

Pogonip (Ord.). Fossil Butte, near Hico, Nevada.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 72, pl. 4, figs. 10a-10d.

=Orthis tricenaria var.

17242. Orthis pogonipensis Hall and Whitfield. Cotypes.
Pogonip (Ord.). Pogonip Mountain, White Pine District,
Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 232, pl. 1, figs. 9-10.

= Dalmanella pogonipensis. See Strophomena nemea.

35215. Orthis (?) remnicha Winchell.

Plesiotypes.

Gallatin (Upper Cambrian). Gallatin Range, Yellowstone National Park.

Walcott, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 451, pl. 61, figs. 3, 3a; pl. 62, figs. 1, 1a-d.

= Plectorthis remnicha.

14231. Orthis resupinata (Martin)?

Plesiotypes.

Lower Carboniferous. Dry Canyon, Oquirrh Mountains, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 265, pl. 5, figs. 1, 2.

=Schizophoria resupinata.

9443. Orthis resupinoides Cox?

Plesiotype.

Upper Carboniferous. Manuelitos Creek, New Mexico

White, Rept. U. S. Geogr. Surv. W. 100th Merid., III. 1881, p. 23, pl. 3, figs. 2a, 2b.

=Schizophoria resupinoides.

17891.

17443. Orthis salemensis Walcott.

Cotype.

Lower Cambrian. Near Salem, Washington County, New York.

Walcott, Amer. Journ. Sci. (3), XXXIV, 1887, p. 190, pl. 1, figs. 17, 17a; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 612, pl. 72, figs. 6, 6a.

= Billingsella salemensis.

35214. Orthis (?) sandbergi Winchell.

Plesiotypes.

Gallatin (Upper Cambrian). Elk Pass, Yellowstone National Park.

Walcott, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 452, pl. 61, figs. 2, 2a-d.

=Billingsella (Otusia) sandbergi.

17885. Orthis subjugata Hall?

Plesiotypes.

Richmond (Ord.). Three miles above Savannah, Illinois.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, pl. 2 B, figs. 4, 5. (?9).

= Hebertella occidentalis.

35455. Orthis (Dalmanella) testudinaria Dalman. Plesiotypes. Trenton (Ord.). Maury County, Tennessee.

Hayes and Ulrich, U. S. Geol. Surv., Folio 95, 1903, illustration sheet, fig. 43.

= Dalmanella testudinaria.

17246. Orthis testudinaria Dalman.

Plesiotype.

Upper Pogonip (Ord.). East of Hamburg Mine, Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 72, pl. 11, figs. 10, 10a.

= Dalmanella testudinaria.

See Orthis disparilis.

9346. Orthis thiemii White.

Plesiotype.

Kinderhook (Miss.). Burlington, Iowa.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1885, p. 164, pl. 41, fig. 4d.

=Rhipidomella thiemii.

17252. Orthis tricenaria Conrad.

Plesiotype.

17253. Upper Pogonip (Ord.). Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 74, pl. 11, figs. 4, 4a.

13784. Orthis tulliensis Vanuxem.

Plesiotype.

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Middle and Upper Devonian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 115, pl. 2, figs. 12, 12a.

=Schizophoria tulliensis.

17945. Orthis umbraculum Schlotheim? Plesiotype.
Upper Carboniferous. Near mouth of Keg Creek, Iowa.
Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, pl. 5, fig. 11.

=Orthotetes robusta.

15077. Orthis umbraculum von Buch? Plesiotype.
Upper Carboniferous. Leavenworth, Kansas.

Hall, Stansbury's Expl. and Surv. Valley Great Salt Lake, Utah, 1852, p. 412, pl. 3, fig. 6.

=Orthotetes cymbula.

1010. Orthisina crassa Meek and Hayden. Cotypes. Upper Carboniferous. Leavenworth City, Kansas.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1858, p. 261.

=Orthotetes crassus.

See Hemipronites crassus.

15359. Orthisina festinata Billings. Plesiotype.

Lower Cambrian. Two miles east of Highgate Springs,

Vermont

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 120, pl. 7, figs. 7-7b; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 613, pl. 72, figs. 7-7b.

= Nisusia festinata.

15361. Orthisina? transversa Walcott. Cotypes.

Lower Cambrian. Parker's Quarry, Georgia, Vermont.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 121, pl. 7, figs. 5, 5a; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 613, pl. 72, figs. 9, 9a.

= Nisusia festinata transversa.

14986. Orthoceras aciculoides Clarke. Holotype.
Naples (Dev.). Cashaqua Creek, Livingston County, New
York.

Clarke, Bull. No. 16, U. S. Geol. Surv., 1885, p. 51, pl. 2, fig. 11.

14989. Orthoceras asmodeus Clarke. Holotype.

Genesee (Dev.). Bristol, New York.

Clarke, Bull. No. 16, U. S. Geol. Surv., 1885, p. 30, pl. 3, fig. 3.

12516. Orthoceras blakei Gabb? Plesiotypes.

Upper Triassic. Ridge above Cottonwood Canyon, West
Humboldt Range, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 104, pl. 10, fig. 11.

17392. Orthoceras (Camaroceras) colon White. Holotype.
Middle Ordovician. Fish Spring, House Range, Utah

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., p. 10 (as O. colon); Rept. U. S. Geogr. Surv. W. Merid., IV, Pt. I, 1877, p. 56, pl. 3, figs. 5a-5d. 12-14.

14428. Orthoceras eurekensis Walcott. Cotype.

Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 265, pl. 23, figs. 2, 2a.

14990. Orthoceras filosum Clarke. Cotypes.
Naples (Dev.). Parrish Gully and Hatch Hill, Naples,

New York.
Clarke, Bull. No. 16, U. S. Geol. Surv., 1885, p. 52, pl. 2, figs.

14020. Orthoceras kingii Meek. Holotype. Upper Devonian. White Pine District, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 47, pl. 2, fig. 8.

Cotypes. Hamilton (Dev.). Bartlett's Mills, Ontario, Canada.
Whiteaves, Cont. to Canadian Pal., I, Pt. V, 1898, pp. 404, 405.

46528. Orthoceras lessuri Clarke. Cotype.

Stones River (Ord.). Dixon, Illinois.

Clarke, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 785, pl. 55, fig. 8.

14992. Orthoceras mephisto Clarke. Holotype. Genesee (Dev.). Bristol, New York.

Clarke, Bull. No. 16, U. S. Geol. Surv., 1885, p. 29, pl. 3, fig. 2.

17381. Orthoceras multicameratum Hall? Plesiotype.
Upper Pogonip (Ord.). Eureka District, Nevada.
Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 86, pl. 12, fig. 3.

28192. Orthoceras olorus baffinensis Schuchert. Cotypes.
Trenton (Ord.). Head of Frobisher Bay, Baffin Land.
Schuchert, Proc. U. S. Nat. Mus., XXII, 1900, p. 169, pl. 12, figs. 19-22.

14991. Orthoceras ontario Clarke. Cotypes.
Naples (Dev.). Parrish Gully, Naples, New York.
Clarke, Bull. No. 16, U. S. Geol. Surv., 1885, p. 51, pl. 3, fig. 1.

14012. Orthoceras parallelum Meek. Holotype.
Upper Devonian. Babylon Hill, White Pine District,
Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Parallel, IV, Pt. I, 1877, p. 48, pl. 2, fig. 9.

28194. Orthoceras porteri Schuchert. Holotype.
Trenton (Ord.). Head of Frobisher Bay, Baffin Land.

Schuchert, Proc. U. S. Nat. Mus., XXII, 1900, p. 169, pl. 12, figs 23-25.

14429. Orthoceras randolphensis Worthen? Plesiotype.
Lower Carboniferous. Eureka District, Nevada,

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 265, pl. 18, fig. 17.

21713. Orthoceras rushensis McChesney? Plesiotype.
Permian. Military Crossing of the Big Wichita, Baylor
County, Texas.

White, Bull. No. 77, U. S. Geol. Surv., 1891, p. 22, pl. 2, figs. 14-16.

28195. Orthoceras scalariformis Schuchert. Holotype.
Trenton (Ord.). Head of Frobisher Bay, Baffin Land.

Schuchert, Proc. U. S. Nat. Mus., XXII, 1900, p. 170, pl. 12, figs. 17, 18.

46271. Orthodesma canaliculatum Ulrich. Cotypes.

46272. Richmond (Ord.). Spring Valley, Minnesota; Waynes-ville. Ohio.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 520, pl. 37, figs. 7-14.

46751. Orthodesma contractum (Hall). Plastotype. Richmond (Ord.). Waynesville, Ohio.

Hall and Whitfield, Geol. Surv. Ohio, Pal. II, 1875, p. 96, pl. 2, fig. 4.

46273. Orthodesma minnesotense Ulrich. Holotype.

Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Nineteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn., 1892, p. 288, fig. 14; Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 517, pl. 37, figs. 12, 14.

46274. Orthodesma parvum Ulrich. Holotype. Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 660, pl. 55, figs. 19, 20.

46344. Orthodesma saffordi Ulrich. Holotype. Stones River (Ord.). Murfreesboro, Tennessee.

Ulrich, Nineteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn., 1892, p. 229, fig. 15.

=Whiteavesia saffordi.

46275. Orthodesma subangulatum Ulrich. Cotypes. Richmond (Ord.). Richmond, Indiana.

Ulrich, Geol. Surv. Ohio, VII, p. 660, pl. 55, figs. 21-23.

46276. Orthodesma subnasutum (Meek and Worthen).

Plesiotype.

Trenton (Ord.). Near Dixon, Illinois.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 518, pl. 36, figs. 23, 24.

46290. Orthodesma subovale Ulrich. Holotype.

Lorraine (Ord.). Morrow, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 82, pl. 7, fig. 18.

= Psiloconcha subovalis.

33919. Orthothetes chemungensis (Conrad). Plesiotype.

33920. Ouray (Upper Dev.). Five localities in central Colorado.

33924. Girty, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 40, 33925. pl. 3, figs. 1-3; variety, pl. 3, figs. 4-6.

= Schuchertella chemungensis.

See Streptorhynchus chemungensis.

14221. Orthothetes inæqualis (Hall). Plesiotype.

Madison (Miss.). Ogden Canyon, Utah.

Girty, Mon. XXXII. Pt. II, U. S. Geol. Surv., 1899, p. 522, pl. 68, fig. 3.

=Schuchertella inæqualis.

See Streptorhynchus inequalis.

14228. Orthothetes inflatus (White and Whitfield). Plesiotype. Waverly (Miss.). Dry Canyon, Utah.

Girty, Mon. XXXII, Pt. II. U. S. Geol. Surv., 1899, pl. 68, fig. 2.

=Schuchertella inflatus.

See Streptorhynchus inflatus.

35341. Orthotichia schuchertensis Girty. Holotype. Weber (Upper Carb.). Glenwood Springs. Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol, Surv., 1903, p. 345, pl. 1, figs. 16-16b.

40277. Ortonella hainesi Miller .

Plesiotypes.

Richmond Ord. . Richmond, Indiana.

Ulrich, Geol. Surv. Ohio. VII. 1893, p. 670, pl. 53, figs. 9-18.

38160. Oryctoblattina laqueata Schilder. Holotype. Upper Coal Measures. Kansas City, Missouri.

Schilder, Bull. No. 124, U.S. Geol. Surv., 1865, p. 133, pl. 11, fig. 5.

Sto3. Oryctoblattina occidua Scudder. Holotype. Upper Coal Measures. Mazon Creek, Grundy County.

Upper Coal Measures. Mazon Creek, Grundy County, Illinois.

Schiller, Mem. Roston Soc. Nat. Hist., IV, 1990, p. 414, pl. 91 fig. 3. Fess. Insects N. America, I. 1990, p. 300, pl. 24, fig. 3.

1542 - Oryctocephalus primus Walcott

Cotypes

Lower Cambrian - Phohe, Nevala,

Walout Bull No. 3, T. S. God Sum. 1886, p. 210, pl. 20, 58 3, 51 Tenth Ann. Kent, U. S. Bed Surv., 1890, p. 253, 7 45, 528, 144 129541. Oryctomya claibornensis Dall.

Holotype.

Claibornian (Eocene). Claiborne, Alabama.

Dall, The Nautilus, XI, 1898, p. 135; Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, pl. 34, figs. 16, 16a; Pt. VI, 1903, p. 1499.

107074. Oscilla indiscreta Guppy.

Holotype.

Oligocene. Vendryes, Jamaica, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 317, pl. 28, fig. 14.

7823. Ostrea anomioides Meek.

Cotypes.

Colorado (Cret.). Missouri River, below Gallatin, Montana.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 488.—White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I 1883, p. 10, pl. 11, figs. 4a, 4b; Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 291, pl. 39, figs. 4, 5.—Stanton, Bull. No 106, U. S. Geol. Surv., 1893, p. 55, pl. 1, figs. 5, 6.

9852. Ostrea bella Conrad.

Holotype.

Cretaceous. Western Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, II, Pt. II, 1857,
 p. 156, pl. 10, figs. 4a, 4b.—White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 292, pl. 59, fig. 6.

12383. Ostrea bellaplicata Shumard.

Plesiotypes.

Eagle Ford (Cret.). Near Denison, Texas.

White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 292, pl. 47, figs. 1, 2.

=Ostrea lugubris.

12383. Ostrea (Alectryonia) bellaplicata (Shumard). Plesiotypes. Eagle Ford (Cret.). Near Denison, Texas.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879, p. 276, pl. 4, figs. 3a, 3b.

=Ostrea lugubris.

8024. Ostrea (Alectryonia) blackii White.

Cotypes.

Cretaceous. Collin County, Texas.

White, Proc. U. S. Nat. Mus., II, 1879, p. 293; Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1883, p. 11, pl. 17, fig. 5.

=Ostrea lugubris.

18616. Ostrea carinata Lamarck.

Plesiotype.

Washita (Lower Cret.). Texas.

White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 293, pl. 43, figs. 2-4.

7800. Ostrea (undet. sp.) = coalvillensis Meek. Cotypes.

Montana (Cret.). Coalville, Utah.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 140, pl. 15, figs. 10, a-c.—White, Fourth Ann. Rept. I'Surv., 1884, p. 293, pl. 36, figs. 1-4.

Plesiotypes.

Eocene. Maryland.

White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 309, pl. 65, figs. 1, 2.

238. Ostrea congesta Conrad.

Plesiotypes.

Niobrara (Cret.). Missouri River, near Niobrara, Nebraska.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 13, pl. 9, figs. 1a-e.—White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 294, pl. 39, figs. 11-13.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 55, pl. 2, figs. 2-4.

9904. Ostrea contracta Conrad.

Cotypes.

Miocene. Oyster Point, Mexico.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory I, Pt. II, 1857, p. 160, pl. 18, figs, a-d.

9871. Ostrea cortex Conrad.

Cotypes.

Cretaceous. Dry Creek, Mexico.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 157, pl. 11, figs. 4a-d.—White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 294, pl. 37, figs. 3, 4.

8642. Ostrea cortex Conrad.

Plesiotypes.

Cretaceous. Colob Plateau, southwest of Kanara, Utah.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 170, pl. 15, figs. 2a-c.

= Ostrea soleniscus.

20253. Ostrea cretacea Morton.

Cotypes.

Lower Cretaceous. Hempstead County, Arkansas.

Owen, Second Rept. Geol. Reconn. Arkansas, 1860, pl. 7, figs. 3a, 3b.

= Ostrea franklini.

20111. Ostrea (Alectryonia) dilleri White.

Cotypes.

Chico (Cret.). Near Falls of Clover Creek, Shasta County, California.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 14, pl. 1, figs. 1, 2; pl. 2, figs. 1, 2.

8300. Ostrea diluviana Linnæus.

Plesiotypes.

Cretaceous. Bell County, Texas.

White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 295, pl. 40, fig. 1; pl. 41, figs. 1, 2.

18611. Ostrea elegantula Newberry.

Cotypes.

Colorado (Cret.). Canadian River, New Mexico.

Newberry, Rept. Expl. Exped. Santa Fé to junction of Grand and Green Riv., Macomb, 1876, p. 33.—White, Fourth Ann. Rept. U. S. Geol. Surv., p. 295, pl. 36, figs. 5-7.

681. Ostrea engermanni Meek.

Cotype.

1884. Jurassic. Red Buttes, North Platte, Wyoming.

Meek, Proc. Acad. Nat. Sci. Phila. for 1860, p. 311.—Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Knowl. No. 172, XIV, 1864, p. 73, text fig. A.—Meek, Rept. Expl. Great Basin of Utah, Simpson, 1876, p. 356, pl. 3, fig. 6.—White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 289, pl. 34, figs. 3, 4.

129972. Ostrea falco Dall.

Cotypes.

Jacksonian (Eocene). Cocoa, Choctaw County, Alabama.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 22; Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 682, pl. 30, figs. 4, 11.

2165. Ostrea glabra Meek and Hayden. Holotype and paratypes.

Laramie (Cret.). Mouth of Judith River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila. for 1857, p. 146.— Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 509, pl. 40, figs. 2a-d.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 421, pl. 9, figs. 1, 2; Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 307, pl. 58, figs. 1, 2.

See Ostrea insecuris.

11889. Ostrea glabra Meek and Hayden.

Plesiotypes.

Laramie? (Cret.). State of Nuevo Leon, Mexico, seven and one-half miles northwest of Lampazor.

White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 307, pl. 61, figs. 2, 3.

13407. Ostrea glabra Meek and Hayden.

Plesiotypes.

Laramie (Cret.). Valley of the South Platte, Colorado.

White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 421, pl. 9, figs. 3, 4; pl. 10, figs. 1, 2; Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 307, pl. 58, figs. 3, 4; pl. 59, figs. 1, 2.

7839. Ostrea glabra arcuatilis (Meek).

Cotypes.

Laramie (Cret.). Near Hallville, Wyoming.

White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 421, pl. 10, fig. 5; Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 308, pl. 59, fig. 5.

=Ostrea arcuatilis.

12472. Ostrea glabra wyomingensis (Meek). Plesiotypes.

Laramie (Cret.). Valley of the South Platte, Colorado.

White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 421, pl. 11, figs. 1, 2; Fourth Ann. Rept. U. S. Geol. Surv., 1884, pl. 60, figs. 1, 2.

9062. Ostrea glabra wyomingensis Meek. Plesiotypes.
Montana (Cret.). Point of Rocks, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883,
p. 56, pl. 20, figs. 1a-c (as O. glabra); Third Ann. Rept.
U. S. Geol. Surv., 1883, p. 421, pl. 11, figs. 3, 4; pl. 12, fig. 1;
Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 307, pl. 60, figs. 3, 4; pl. 61, fig. 1 (as Ostrea glabra).

5117. Ostrea gregaria Sowerby.

Plesiotype.

Jurassic. Cordillera de Dona Ana, Chile.

Conrad, U. S. Naval Ast. Exped. S. Hemisphere, 1855, II, p. 283, pl. 41, fig. 1.

23109. Ostrea haydeni White.

Cotypes.

Bear River (Cret.). Twenty miles north of Cokeville, Wyoming.

White, Bull. No. 128, U.S. Geol. Surv., 1895, p. 32, pl. 2, figs. 1, 2.

329. Ostrea inornata Meek and Hayden.

Holotype.

Fort Pierre (Cret.). Great Bend of the Missouri below Fort Pierre, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1860, p. 181.— Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 14, pl. 10, fig. 4.

9053. Ostrea insecuris White.

Cotype.

Laramie (Cret.). Point of Rocks, Wyoming.

White, Powell's Rept. Geol. Uinta Mountains, 1876, p. 112: Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 56, pl. 21, figs. 1a, b (as O. glabra); Third Ann. Rept. U. S. Geol. Surv., 1883, p. 421, pl. 10, figs. 3, 4 (as var. insecuris); Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 307, pl. 59, figs. 3, 4 (as var. insecuris).

=Ostrea glabra.

5116. Ostrea irregularis Münster.

Plesiotypes.

Jurassic. Cordillera de Dona Ana, Chile.

Conrad, U. S. Naval Ast. Exped. S. Hemisphere, 1855, 11, p. 283, pl. 42, fig. 9.

2401. Ostrea (Alectryonia) larva Lamarck.

Plesiotypes.

Cretaceous. Near Ameytown, New Jersey.

White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 296, pl. 42, figs. 2-9.

9822. Ostrea lugubris Conrad.

Holotype.

Cretaceous. East of Red River, New Mexico.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I. Pt. II. 1857, p. 156, pl. 10, figs. 5a, 5b.—White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 297, pl. 41, fig. 3.

See Ostrea (Alectryonia) bellaplicata, and O. (A.) blackii.

9822. Ostrea lugubris Conrad.

Holotype and plesiotypes.

22859. Colorado (Cret.). Eastern New Mexico; Huerfano Park, to Colorado; Sherman, Texas.

22861. Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 58, pl. 4, figs.

20255. Ostrea lugubris Conrad.

Plesiotype.

Colorado (Cret.). Vodo del Chama, New Mexico.

Meek, Rept. Expl. Exped., Santa Fé to junction of Grand and Green rivers, Macomb, 1876, p. 123, pl. 1, fig. 1a.

22857. Ostrea malachitensis Stanton.

Cotypes.

Colorado (Cret.). Malachite, Colorado.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 57, pl. 2, figs. 5-8.

9895. Ostrea multilirata Conrad.

Cotypes.

Cretaceous. Dry Creek, Mexico.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory I, Pt. II, 1857,
p. 157, pl. 12, figs. 1a-d.—White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 298, pl. 38, figs, 1, 2.

13313. Ostrea panzana Conrad.

Holotype.

13338. Miocenė. Panza and Estrella valleys, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 193, pl. 2, fig. 4.—Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 683.

325. Ostrea patina Meek and Hayden.

Cotypes.

Fort Pierre (Cret.). Missouri River, Montana, two hundred miles above Milk River.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 277.—White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 298, pl. 47, figs. 4-6.

325. Ostrea (Gryphæa?) patina Meek and Hayden. Cotypes.
Fort Pierre (Cret.). Missouri River, Montana, two hundred miles above mouth of Milk River.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 16, pl. 10, figs. 2a, 2b (bis.), 3a, 3b; pl. 11, figs. 1, 3, 4.

330. Ostrea pellucida Meek and Hayden.

Holotype.

Fox Hills (Cret.). Long Lake, North Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 15, pl. 28, figs. 4a, 4b.—White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 296, pl. 50, figs. 5, 6.

=Ostrea translucida.

111621. Ostrea percrassa Conrad.

Plesiotype.

Miocene. Near Shiloh, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 29, pl. 3, figs. 1-4.

18612. Ostrea plumosa Morton.

Plesiotypes.

Cretaceous. New Jersey.

White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 299, pl. 37, figs. 5, 6.

135127. Ostrea podagrina Dall.

Holotype.

Upper Eocene. Near Sulphur Spring, Suwanee River, Florida.

Dall, Proc. U. S. Nat. Mus., XVII, 1895, p. 22; Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 682, pl. 30, figs. 5, 6.

107336. Ostrea præ-compressirostra Harris.

Holotype.

Midway (Eocene). Arkansas.

Harris, Ann. Rept. Geol. Surv. Arkansas, 1894, Pt. II, p. 39.

8855. Ostrea (Alectryonia) procumbens White. Cotypes.

Jurassic. Vermilion Hogbacks, Northwestern Colorado.

White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 290, pl. 35, figs. 6-7.

8639. Ostrea prudentia White. Cotypes. Colorado (Cret.). East of Impracticable Ridge, Utah.

White, Rept. U. S. Geogr. Surv. W. of 100th Merid., IV, Pt. I. 1876, p. 171, pl. 14, figs. 2a-d; Fourth Ann. Rept. U. S. Geol. Surv., 1894, p. 299, pl. 40, figs. 5, 6.—Stanton, Bull. No. 106,

U. S. Geol. Surv., 1893, p. 54, pl. 50, figs. 3, 4.

135138. Ostrea pulaskensis Harris. Cotypes.

Midway (Eocene). Pulaski County, Arkansas.

Harris, Ann. Rept. Geol. Surv. Arkansas, 1894, Pt. II, p. 40, pl. 1, figs. 3a-d.

8077. Ostrea quadriplicata Shumard. Plesiotypes.
Denison (Cret.). Denison, Texas.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879, 275.
pl. 5, fig. 6a; Fourth Ann. Rept. U. S. Geol. Surv., 1884,
p. 299, pl. 43, fig. 5.

9885. Ostrea robusta Conrad. Cotypes. Cretaceous or Eocene? Jacun, three miles below Laredo, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857,
p. 156, pl. 11, figs. 3a, 3b.—White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 300, pl. 40, figs. 3, 4.

8056. Ostrea (Alectryonia) sannionis White. Cotypes.

Montana (Cret.). Valley of Weber River, near Coalville,

Utah.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879, p. 277, pl. 2, figs. 2a-e; Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 300, pl. 45, figs. 3-7.

18598. Ostrea sellæformis Conrad. Eocene. Alabama.

Plesiotype.

White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 311, pl. 62, figs. 1, 2; pl. 63, fig. 1.

153874. Ostrea sellæformis pauciplicata Dall. Cotypes.
Oligocene. Oak Grove, Santa Rosa County, Florida.
Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 678.

129775. Ostrea sellæformis perplicata Dall. Cotypes. Eccene. Catons Bluff, Conecuh River, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 678.

114573. Ostrea sellæformis rugifera Dall. Cotypes. 153875. Oligocene. Alum Bluff, Calhoun County, and Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 678. 7779. Ostrea soleniscus Meek.

Cotypes.

7780. Colorado (Cret.). Near Coalville, Utah, and Bear River City, Wyoming.

Meek, Proc. Amer. Philos. Soc., IX, 1871, p. 430; Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 487.—White, Twelfth Ann. Rept. U. S. Geol. Surv. Terrs., Pt. I, 1883, p. 9, pl. 11, figs. 2a, b; Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 300, pl. 42, fig 1.

See Ostrea cortex.

7780. Ostrea soleniscus Meek. Cotypes and plesiotypes.

22858. Colorado (Cret.). Coalville, Utah, and Bear River City, Wyoming.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 56, pl. 2, fig. 1; pl. 3, figs. 1, 2.

8581. Ostrea strigilecula White.

Cotypes.

Jurassic. Two miles South of Dirty Devil River, Utah.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 163, pl. 13, figs. 3a-d; Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 289, pl. 35, figs. 9-11.

12271. Ostrea strigilecula White.

Plesiotypes.

12318. Jurassic. Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 348, pl. 3, figs. 8-12.

2101. Ostrea subalata Meek.

Holotype.

Fox Hills (Cret.). Moreau River, South Dakota.

White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 300, pl. 39, fig. 10.

2101. Ostrea (Gryphæostrea?) subalata Meek. Holotype. Fox Hills (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 15, pl. 28, fig. 5.

1668. Ostrea subfalcata Conrad.

Plesiotypes.

Miocene. Coggins Point, Virginia.

White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 313, pl. 68, figs. 1-3.

13338. Ostrea subjecta Conrad.

Holotype.

Miocene. Sierra Monica, between Santa Clara River and Los Angeles Valley, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 193, pl. 2, fig. 3.

[This is a young shell and may be the same as O. trigonalis Conrad. W. H. Dall.]

9867. Ostrea subspatulata Lyell and Sowerby. Plesiotypes.

Cretaceous. Western Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 155, pl. 10, figs. 3a, 3b. 8386. Ostrea subtrigonalis Evans and Shumard. Plesiotypes. Laramie (Cret.). Upper Missouri River.

> White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 421, pl. 12, figs. 2-5; Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 308, pl. 61, figs. 4-7.

2172. Ostrea subtrigonalis Evans and Shumard? Plesiotypes. Laramie (Cret.). Mouth of Judith River, Montana.

> Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 510, pl. 40, figs. 1a-d.

18613. Ostrea tecticostata Gabb.

Plesiotypes.

Cretaceous. Eufaula?, Alabama.

White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 301, pl. 1. figs. 3, 4.

570. Ostrea thirsae Gabb.

Plesiotype.

Eocene. Eufaula, Alabama.

White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 311, pl. 63, figs. 4-6.

330. Ostrea translucida Meek and Hayden. Holotype. Fox Hills (Cret.). Long Lake, North Dakota.

> Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1857, p. 147. See Ostrea pellucida.

20262. Ostrea (Gryphæa) uniformis Meek. Colorado (Cret.). Pagosa Springs, Colorado.

Holotype.

Meek, Rept. Expl. Exped. Santa Fé to junction of Grand and Green Rivers, Macomb, 1876, p. 124, pl. 1, figs. 2a-c.

20262. Ostrea uniformis (Meek). Holotype. Colorado (Cret.). Pagosa Springs, Colorado.

> Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 59, pl. 3, figs. 3, 4.

9902. Ostrea veleniana Conrad. Holotype. Tertiary. Rancho Helena, below Salado, Texas.

> Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 160, pl. 17, figs. 2a, 2b.—White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 314, pl. 70, fig. 1 (as O. veberiana).

9833. Ostrea vellicata Conrad. Holotype. Washita? (Lower Cret.). Rio Grande between El Paso and Frontera.

> Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 156, pl. 11, figs. 2a, 2b.

20252. Ostrea vesicularis Lamarck. Plesiotype. Cretaceous.

Hempstead County, Arkansas.

Owen, Second Rept. Geol. Reconn. of Arkansas, 1860, pl. 8, fig. 6.

9832. Ostrea vespertina Conrad. Cotypes.
Miocene. Carriso Creek, and near San Diego, California.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II,
1857, p. 160, pl. 17, figs. 1a-d.—White, Fourth Ann. Rept.
U. S. Geol. Surv., 1884, p. 315, pl. 71, figs. 2-5.

111623. Ostrea virginiana (Gmel.). Plesiotype.
Miocene. Near Shiloh, New Jersey.
Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 27, pl. 11,
figs. 1-6.

111623. Ostrea virginiana procyon Tuomey and Holmes.

Plesiotype.

Miocene. Near Shiloh, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 28, pl. 1, figs. 4-5.

=Ostrea georgiana mauricensis.

2414. Ostrea vomer Morton. Plesiotypes.
Cretaceous. New Egypt, New Jersey.
White, Fourth Ann. Rept. U. S. Geol. Surv., 1884, p. 302, pl. 48, figs. 8-10.

9062. Ostrea wyomingensis Meek. Cotypes.

Montana (Cret.). Point of Rocks, Wyoming.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 508.

25495. Otiorhynchites absentivus Scudder. Holotype. Florissant (Oligocene). Florissant, Colorado. Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 46, pl. 9, fig. 13.

25515. Otiorhynchites commutatus Scudder. Holotype. Older Tertiary. Roan Mountains, western Colorado. Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 48, pl. 9, fig. 9.

25516. Otiorhynchites fossilis Scudder. Holotype.
Older Tertiary. Fossil, Wyoming.
Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 47, pl. 8, fig. 9.

Older Tertiary. Roan Mountains, western Colorado.

Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 47, pl. 9, fig. 12.

25496. Otiorhynchus flaccus Scudder. Holotype.
Older Tertiary. Roan Mountains, western Colorado.
Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 45, pl. 9, fig. 5.

25497. Otiorhynchus subteractus Scudder. Holotyj Older Tertiary. Roan Mountains, western Colorado. Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 45, pl. 9, fig. 8

- Upper Eocene. Martin Station, Marion County, Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 164, pl. 10, figs. 10, 11.
- Oligocene. Jamaica, British West Indies.

  Guppy, Geol. Mag., London, Dec. II, I, 1874, p. 409, pl. 16, fig. 7.
- 45949 Oxydiscus cristatus (Safford). Cotypes.
  to Trenton (Ord.). Nashville, Jackson County, and Linds45951. leys Hill, near Lebanon, Tennessee.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 914, pl. 82, figs. 26–28.

See Cyrtolites cristatus.

45952. Oxydiscus subacutus Ulrich. Cotypes. Trenton (Ord.). Danville, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 913, pl. 62, figs. 62-65; pl. 82, figs. 23-25.

13315. Pachydesma inezana Conrad. Holotype.
13349. Miocene. Santa Inez Mountains, Santa Barbara County,
California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 193, pl. 5, figs. 2, 4.

43721. Pachydictya acuta (Hall). Plesiotypes.
44099. Trenton (Ord.). Near Cannon Falls, Minnesota, and
Trenton Falls, New York.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 155, pl. 8, figs. 11, 12, 14, 17; pl. 9, fig. 7. See Stictopora acuta.

- 43583. Pachydictya elegans Ulrich. Cotypes and figured sections. Trenton (Ord.). St. Paul, Minnesota.

  Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 154, pl. 8, figs. 18, 19; pl. 9, figs. 8, 9.
- 43429. Pachydictya everetti Ulrich. Holotype and figured sections. Stones River (Ord.). Dixon, Illinois.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 523, pl. 33, figs. 1-1f.
- 43581. Pachydictya fimbriata Ulrich. Cotypes and figured sections. Black River (Ord.). St. Paul, Minnesota.

  Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, 14. I, 1893, p. 152, pl. 8, figs. 28-34; pl. 9, figs. 13, 14.
- 43783. Pachydictya firma Ulrich. Figured sections of cotype. Richmond (Ord.). Wilmington, Illinois.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 525, pl. 31, figs. 2b, 2c, 2d, 2f.

43584. Pachydictya foliata Ulrich. Cotypes and figured sections. Stones River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Pinal Rept., III, Pt. I, 1893, p. 149, pl. 9, figs. 1-5; pl. 10, figs. 5-10.

43784. Pachydictya gigantea Ulrich. Figured sections of cotype. Richmond (Ord.). Wilmington, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 524, pl. 31, figs. 3b-3e.

43473. Pachydictya hexagonalis Ulrich. Figured sections and fragment of holotype.

Richmond (Ord.). Stony Mountain, Manitoba.

Ulrich, Geol. Surv. Canada, Contr. Micro-Pal., Cambro-Sil., Pt. II, 1889, p. 42, pl. 9, figs. 2-2c.

43582. Pachydictya occidentalis Ulrich. Cotypes and figured sections.

Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 151, pl. 8, figs. 20-27; pl. 9, figs. 6-10.

43702. Pachydictya pumila Ulrich. Cotypes. Trenton (Ord.). Cannon Falls, Minnesota.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XII, 1890, p. 186, figs. 11, 11a-d; Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 157, pl. 8, figs. 4, 5; pl. 10, figs. 1-4.

See Rhinidictya humilis.

43585. Pachydictya pumila sublata Ulrich. Cotypes.

Trenton (Ord.). Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 158.

43701. Pachydictya robusta Ulrich. Cotypes and figured sections. Sevier (Ord.). Near Knoxville, Tennessee.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 173, pl. 8, figs. 10, 10a-c.

43785. Pachydictya splendens Ulrich. Figured section of cotype. Richmond (Ord.). Wilmington, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 523, pl. 32, fig. 1b.

43703. Pachydictya triserialis Ulrich. Cotypes and figured sections. Trenton (Ord.). Montreal, Canada.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XII, 1890, p. 187, figs. 1a, 12a-c; Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 159, pl. 10, figs. 11-14.

41824. Pachydomella tumida Ulrich. Holotype

Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p pl. 13, figs. 5a-c.

- 3590. Pachydomus antiquatus (Sowerby). Plesiotypes.
  Carboniferous. Harpers Hill, New South Wales,
  Australia.
  - Dana, Wilkes U. S. Expl. Exped., X. 1849, p. 693, Atlas, pl. 5, fig. 2.
- 25534. Pachylobius compressus Scudder. Cotype.
  Older Tertiary. Roan Mountains, western Colorado.
  Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 90, pl. 10, fig. 11.
- 25535. Pachylobius delecticius Scudder. Holotype.
  Older Tertiary. White River, Utah.
  Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 90, pl. 10, fig. 14.
- 25536. Pachylobius deprædatus Scudder. Cotype.
  Older Tertiary. Roan Mountains, western Colorado.
  Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 91, pl. 10, fig. 12.
- 8153. Pachymelania chrysalis (Meek). Cotypes and plesiotypes.
  23111. Bear River (Cret.). Sulphur Creek, and Sage Station,
  Wyoming.

White, Bull. No. 128, U. S. Geol. Surv., 1895, p. 51, pl. 7, figs. 6, 7, 8, 12, 13.

See Goniobasis chrysalis.

- 8157. Pachymelania chrysalloidea (White). Cotypes and plesiotypes.
  - Bear River (Cret.). Sulphur Creek, and near Evanston. Wyoming.

White, Bull. No. 128, U. S. Geol. Surv., 1895, p. 52, pl. 7, figs. 4, 5. See Goniobasis chrysalloidea.

8152. Pachymelania cleburni (White). Cotypes and plesiotypes.
23112. Bear River (Cret.). Bear River Valley, near mouth of
Sulphur Creek, and seven miles north of Evanston,
Wyoming.

White, Bull. No. 128, U. S. Geol. Surv., 1895, p. 51, pl. 7, figs. 1-3. See Goniobasis cleburni.

19016. Pachymelania? macilenta (White). Holotype and plesiotypes.

Bear River (Cret.). Sulphur Creek, and near Evanston. Wyoming.

White, Bull. No. 128, U.S. Geol. Surv., 1895, p. 54, pl. 7, figs. 9–11. See Goniobasis macilenta.

- 22315. Pachymelania turricula White. Holotype.
  Bear River (Cret.). Sulphur Creek, and Sage Station,
  Wyoming.
  - White, Bull. No. 128, U. S. Geol. Surv., 1895, p. 53, pl. 7, figs. 14, 15.

8043. Pachymya austinensis Shumard. Plesiotypes. Washita (Cret.). Salado, Bell County, Texas.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879, p. 298, pl. 8, fig. 1b.

8027. Pachymya? compacta White.

Holotype.

Cretaceous. Bell County, Texas.

White, Proc. U. S. Nat. Mus., II, 1879, p. 297, pl. 6, figs. 3, 4; Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1883, p. 22, pl. 17, figs. 4a, b.

8091. Pachymya? herseyi White. Cotypes.
Fox Hills (Cret.). Near confluence of St. Vrains with
South Platte, northern Colorado.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879, p. 298, pl. 5, figs. 5a, 5b.

7813. Pachymya? truncata Meek.

Holotype.

Cretaceous. Salt Lake, Utah.

Meek, Fourth Ann. Rept. U. S. Geol. Surv. Terr., 1871, p. 301. = Trapezium truncatum.

45953. Palæacmæa humilis Ulrich and Scofield. Cotypes. Black River (Ord.). Goodhue County, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 837, pl. 61, figs. 45, 46.

40887. Palæaster harrisi Miller.

Holotype.

Richmond (Ord.). Near Waynesville, Ohio.

Miller, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 117, pl. 10, figs. 2, 2a.

= Urasterella grandis.

40881. Palæaster longibrachiatus Miller.

Holotype.

Richmond (Ord.). Near Clarksville, Ohio.

Miller, Journ. Cincinnati Soc. Nat. Hist, I, 1878, p. 102, pl. 3, fig. 4.

40883. Palæaster magnificus Miller.

Holotype.

Richmond (Ord.). Near Waynesville, Ohio.

Miller, Journ. Cincinnati Soc. Nat. Hist., VII, 1884, p. 16, pl. 4, figs. 3, 3a.

40880. Palæaster miamiensis Miller.

Holotype.

Richmond (Ord.) Near Waynesville, Ohio.

Miller, Journ. Cincinnati Soc. Nat. Hist., III, 1880, p. 143, pl. 4, fig. 3.

38032. Palæocampa anthrax Meek and Worthen. Plesiotypes
Upper Coal Measures. Mazon Creek, Grundy Coun'
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1882, p. 293, p. figs. 6, 7; Foss. Insects N. America, I, 1890, pp. 258-9, p. figs. 6, 7.

38850. Palæocaris typus Meek and Worthen. Plesiotype.
Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Packard, Mem. Nat. Acad. Sci., IV, 1886, p. 129, pl. 7, fig. 2.

24584. Palæochorda prima Whitfield. Cotypes.

Upper Cambrian. Head of Redwater Valley, Black Hills,
South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 331, pl. 1, fig. 2.

24334. Palæoneilo sulcata Hartt and Rathbun. . Cotype. Middle Devonian. Ereré, Para, Brazil.

Hartt and Rathbun, Ann. Lyceum Nat. Hist. N. Y., XI, 1875, p. 124.

24582. Palæophycus occidentalis Whitfield. Cotypes.
Upper Cambrian. Head of Redwater Valley, Black Hills,
South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 332, pl. 1, fig. 3.

38002. Palenarthrus impressus Scudder. Holotype.
Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, p. 422, pl. 38, fig. 4; Foss. Insects N. America, I, 1890, p. 398, pl. 30, fig. 4.

8081. Paliurus pentangulatus White. Holotype.
Fox Hills (Cret.). Monument Creek, near Colorado
Springs, Colorado.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879, p. 302, pl. 4, figs. 4a, 4b.

13317. Pallium estrellanum Conrad.

Cotype.

Conrad, Rept. Expl. and Surveys R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 191.—Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 701.

== Pecten (Lyropecten) hermanni. See Pecten hermanni.

Miocene. Estrella, California.

25478. Paltorhynchus? bisulcatus Scudder. Cotype.
Older Tertiary. Roan Mountains, western Colorado.
Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 19, pl. 8, fig. 3.

162542. Paludestrina curta Arnold. Holotype.
Pleistocene. San Pedro, California.

Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 305, pl. 8, fig. 2.

162541. Paludestrina stokesi Arnold. Holotype.
Pleistocene. San Pedro, California.

Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 306, pl. 8, fig. 3.

- 2156. Paludina conradi (Meek and Hayden). Holotype and paratypes.

  Laramie (Cret.). Bad Lands of Judith River, Montana.

  Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 122.

  = Viviparus conradi.
- 2154. Paludina leai Meek and Hayden. Holotype and paratypes.

  Laramie (Cret.). Three miles below Fort Clark, North

  Dakota.

  Meek and Hayden Proc. Acad. Not. Sci. Phila. VIII. 1876 p. 121.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 121. = Viviparus leai.

- 12476. Paludina leidyi Meek and Hayden. Holotype.

  Laramie (Cret.). Ten miles below Fort Union, North
  Dakota. (Specimen labeled mouth of Yellowstone.)

  Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 123.

  = Viviparus leidyi.
- 2154. Paludina multilineata Meek and Hayden. Holotype and paratypes.

  Laramie (Cret.). Fort Clark, North Dakota.

  Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 120.

  = Campeloma multilineata.
- 2157. Paludina peculiaris Meek and Hayden. Cotypes.
  Laramie (Cret.). Fort Clark, North Dakota.

  Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 122.

  = Viviparus peculiaris.
- 2155. Paludina retusa Meek and Hayden. Holotype and paratypes.

  Laramie (Cret.). Mouth of Yellowstone River, North Dakota.

  Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 122.

  = Viviparus retusus.
- 2158. Paludina trochiformis Meek and Hayden. Holotype and paratypes.

  Laramie (Cret.). Ten miles below Fort Union, North Dakota.

  Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 122.

  = Viviparus trochiformis.
- Paludina vetula Meek and Hayden. Holotype and paratypes.

  Laramie (Cret.). Bad Lands of Judith River, Montana.

  Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856

  = Campeloma vetula.

109290. Pandora (Kennerleyia) arctica Dall. Holotype.
Pleistocene. Saco, Maine.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1520, pl. 57, fig. 26.

135848. Pandora (Kennerleyia) dodona Dall. Holotype.
Uppermost Oligocene. Oak Grove, Santa Rosa County,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1518, pl. 57, fig. 25.

11875. Pandora (Kennerleyia) lata Dall. Holotype. Miocene. St. Mary's County (?), Maryland.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1520, pl. 57, fig. 18.

1018. Panopæa cooperi Meek and Hayden. Holotype. Upper Carboniferous. Near Helena, Kansas.

Meek and Hayden, Trans. Albany Inst., IV, 1858, p. 83.

= Chænomya cooperi. See Allorisma? cooperi.

111584. Panopæa goldfussi Wagner.

Cotype.

Miocene. Jericho, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 89, pl. 16, figs. 9-13.

= Panopea whitfieldi.

180. Panopæa occidentalis Meek and Hayden. Holotype. Fox Hills (Cret.). Near mouth of Judith River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 270.

200. Panopæa (Myacites) subelliptica Meek and Hayden.

Cotypes.

Jurassic. Black Hills, South Dakota.

=Glycymeris occidentalis.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1858, p. 52. = Myacites subellipticus.

38100. Paolia lacoana Scudder. Cotypes. Upper Coal Measures. Near Pittston, Pennsylvania.
Scudder, Proc. Amer. Acad. Arts and Sci., XX, 1885, p. 173.

164867. Papyridea harrimani Dall. Holotype.
Miocene. Popof Island, Shumagins, Alaska.

Dall, Harriman Alaska Exped., IV, 1904, p. 114, pl. 10, fig. 5.

158174. Paracyathus alternatus Vaughan. Holotype and paratypes. 158189. Claibornian (Eocene). Bienville Parish, Louisiana, New-158191. ton, Mississippi, and Sowilpa Creek, Alabama.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 105, pl. 8, figs. 11, 11a, 13-14b.

158193. Paracyathus bellus Vaughan. Cotypes.

158194. Claibornian (Eocene). Clarke County, Mississippi.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 108, pl. 8, figs. 16-20.

158209. Paracyathus cylindricus Vaughan. Cotypes. Midwayan? (Eocene). Wilcox County, Alabama.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 109, pl. 9, figs. 1-1b.

158192. Paracyathus granulosus Vaughan. Holotype. Woods Bluff (Eocene). Woods Bluff, Alabama.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 107, pl. 8, figs. 15-15b.

164738. **Paracyathus pedroënsis** Vaughan. Holotype. Pleistocene. San Pedro, California.

Vaughan in Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 88, pl. 3, figs. 1, 1a.

158210. Paracyathus rugosus Vaughan. Holotype. Woods Bluff (Eocene). Woods Bluff, Alabama.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 109, pl. 8, figs. 21-21b.

15186. Paracyclas peroccidens Hall and Whitfield. Cotypes.
Upper Devonian. Treasure Hill, White Pine District,
Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 248, pl. 3, figs. 14-17.

13673. Paracyclas sabini White.

Cotype.

9279. Upper Devonian. Rockford, Iowa.

White, Proc. Acad. Nat. Sci. Phila., 1876, p. 31.

4888. Paradoxides boltoni Bigsby. Plastotype. Lockport (Sil.). Lockport, New York.

Green, Mon. Trilobites N. America, Phila., 1832, p. 60. Cast No. 60.

=Lichas boltoni.

4931. Paradoxides harlani Green. Plastotype

Middle Cambrian. Braintree, Massachusetts.

Green, Suppl. Mon. Trilobites N. America, Phila., 1835, p. 14. Cast No. 39.

15453. Paradoxides? nevadensis Meek. Holotype.

Middle Cambrian. Antelope Spring, House Range, Ut

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. pl. 1, fig. 5.

=Olenoides nevadensis.

21706. Paralegoceras baylorensis (White). Holotype.
Permian. Military crossing of the Big Wichita, Baylor
County, Texas.

Smith, Mon. XLII, U. S. Geol. Surv., 1903, p. 99, pl. 4, figs. 9-11. See Goniatites baylorensis.

8360. Paramithrax? walkeri Whitfield. Plastotype.
Cretaceous. San Antonio, Texas.

White, Twelfth Ann. Rept., U. S. Geol. Surv. Terr., Pt. I, 1883, p. 37, pl. 16, figs. 1a-c; pl. 17, fig. 1a.

12380. Parapholas sphenoideus (White). Cotypes. Colorado (Cret.). Upper Kanab, Southern Utah.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879, p. 300, pl. 5, figs. 1a-d.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 125, pl. 27, figs. 1, 2.

158217. Parasmilia ludoviciana Vaughan. Cotypes. 158218. Jacksonian (Eocene). Montgomery, Louisiana.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 113, pl. 9, figs. 6-13.

38044. Paromylacris ampla Scudder. Holotype.
Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, p. 408, pl. 31, fig. 7; Foss. Insects N. America, I, 1890, p. 384, pl. 23, fig. 7; Bull. 124, U. S. Geol. Surv., 1895, p. 51, pl. 3, fig. 4.

38161. Paromylacris clintoniana Scudder. Holotype. Upper Coal Measures. Near Clinton, Missouri.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 53, pl. 3, fig. 6.

38048. Paromylacris? pluteus Scudder. Holotype.
Upper Coal Measures. Butler Mine, Pittston, Pennsylvania.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 54, pl. 3, fig. 2.

38047. Paromylacris rotunda Scudder. Holotype.
Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, p. 406, pl. 32. figs. 1, 2; Foss. Insects N. America, I, 1890, p. 382, pl. 24, figs. 1, 2.

38046. Paromylacris triangularis Scudder. Holotype.
Upper Coal Measures. Mazon Creek, Grundy County.
Illinois.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 52, pl. 3, fig. 3.

9396. Patella levettei White.

St. Louis (Miss.). Spergen Hill, Indiana.

Holotype.

White, Eleventh Ann. Rept. Indiana Dept. Geol. and Nat. Hist., 1882, p. 359, pl. 39, figs. 4, 5.

46565. Pattersonia difficilis Miller: Plesiotype.

Lorraine (Ord.). Cincinnati, Ohio.

Rauff, Palaeontographica, XL, 1894, p. 268, pl. 6, figs. 17-19.

46566. Pattersonia ulrichi Rauff. Holotype.

Lorraine (Ord.). Cincinnati, Ohio.

Rauff, Palaeontographica, XI., 1894, p. 271, pl. 6, fig. 21.

5107. Pecten? (Neithea) alatus (Von Buch). Plesiotype.
Jurassic. Cerro de Tres Cruces, Coquimbo, Chile.

Conrad, U. S. Naval Ast. Exped. S. Hemisphere, 1855, II, p. 283, pl. 41, fig. 2.

13350. Pecten altiplicatus Conrad. , Holotype.
Miocene. San Raphael Hills, Santa Barbara County,
California.

Conrad, Rept. Expl. and Survs. R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 191, pl. 3, fig. 2.—Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 700.

=Pecten (Chlamys) altiplicatus.

Oligocene. Alum Bluff, Chattahoochee River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 740, pl. 34, figs. 10, 11.

680. Pecten bellistriata Meek.

Cotypes.

Jurassic. Red Buttes, North Platte, Wyoming.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila. for 1860, p. 311.

= Camptonectes bellistriatus.

135782. Pecten (Euvola) bowdenensis Dall. Holotype.
Oligocene. Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 713, pl. 29, fig. 1.

Oligocene. Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 720, pl. 34, fig. 8.

135058. Pecten (Chlamys) cactaceus Dall. Holotype.
Tertiary. Near Atlantic terminus of Tehuantepec Railroad.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 716, pl. 34, fig. 2.

23026. Pecten californicus Gabb? Plesiotype.

Knoxville (Lower Cret.). Near Stephenson, Tehama
County, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1 pl. 2, fig. 10.

- 107756. Pecten Nodipecten caloosaënsis Dall. Holotype. Pliocene. Caloosahatchie River, near Fort Thompson. Florida.
  - Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 731, pl. 29, fig. 12.
- Oligocene. Near Baileys Ferry, Calhoun County, Florida.

  Itall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 733.
  pl. 29, fig. 9.
- 57754. Pecten Chlamys coccymelus Dall.
  Miocene. Plum Point, Maryland.

  Holotype.
  - Dall, Trans. Wagner Free Inst. Sci. Phila., III. Pt. IV, 1898, p. 74:, pl. 34, fig. 1.
- 141025. Pecten Chlamys cocoanus Dall. Holotype. Jacksonian Eocene Cocoa, Choctaw County, Alabama.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 78.
  pl. 34, fig. 23.
- 61246b. Pecten Pecten compactus Dall. Holotype.
  Pliocene. Ventura County. California.
  - Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 707. pl. 34, fig. 5.
  - 23028. Pecten complexicosta Gabb. Plesiotypes 23102. Knoxville Lower Cret. . Wilbur Springs, Colusa County. California.
    - Stanton, Bull. No. 153, U. S. Geol. Surv., 1898 Feb., 1896 , p. 5-pl. 2, figs. 7-9.
  - 3652. Pecten comptus Dana.

    Carboniferous. Harpers Hill on the Hunter. New South
    Wales. Australia.
    - Dana, Wilkes U. S. Expl. Expedi., X. 1849, p. 784, Atlas, pl. 6 fig. 5.
- Oligocene. Near Baileys Ferry, Calhoun County, Florida.

  Lall, Trans, Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 78, pl. 34, figs. 14, 15.
- 107791. Pecten Patinopecten coosensis Shumard. Plesiotype Miocene. Coos Bay. Oregon.
  - Dall, Trans, Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. -, pl. 26, fig. 2.
- 115527. Pecten Plagioctenium demiurgus Pall.

  Miocene. Savanetta Trinidad. West Indies.

  Holotype
  - Dall, Trans. Wagner Free Inst. Sci. Phila . III, Pt. IV, 1898, p.7A pl. 26, fig. 3.

8398. Pecten deserti Conrad. Holotype.

Tertiary. Carrijo Creek, Colorado Desert, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. River to Pacific Ocean, V, 1856, p. 325, pl. 5, fig. 41.—Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 703.

= Pecten (Plagioctenium) deserti.

13335. Pecten discus Conrad.

Holotype.

Miocene. Between La Purissima and Santa Inez, Čalifornia.

Conrad, Rept. Expl. and Surv. R. R. Miss. River to Pacific Ocean, VII, 1857, p. 190, pl. 3, fig. 1.

= Pecten (Chlamys?) discus.

30215. Pecten duplicicosta Roemer?

Plesiotype.

Buda (Lower Cret.). Near Austin, Texas.

Shattuck, Bull. No. 205, U. S. Geol. Surv., 1903, p. 16, pl. 5, fig. 5.

145432. Pecten eboreus darlingtonensis Dall.

Cotypes.

Miocene. Darlington, South Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 750.

107755. Pecten eboreus senescens Dall.

Holotype.

Pliocene. Waccamaw River, South Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 751, pl. 29, fig. 5.

2495. Pecten edgecombensis Conrad.

Holotype.

Miocene. Edgewood County, North Carolina.

Conrad, Proc. Acad. Nat. Sci. Phila., 1862, pp. 291, 581.—Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 722.

= Pecten jeffersonius edgecombensis.

115533. Pecten (Pecten) eugrammatus Dall.

Holotype.

Oligocene. Haiti, West Indies.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 712, pl. 34, fig. 22.

7941. Pecten (Patinopecten) expansus Dall.

Cotypes.

148112. Pliocene. Near San Diego, California.

Dall, Proc. U. S. Nat. Mus., I, 1878, p. 14; Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 706, pl. 26, fig. 1.

221. Pecten extenuatus Meek and Hayden.

Cotypes.

Jurassic. Southwest base of Black Hills, South Dakota.
Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1860, p. 184.

= Camptonectes extenuatus.

137832. Pecten (Pseudamusium) frontalis Dall.

Coty

Eocene. Garlands Creek, Clark County, Mississippi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p.

107790. Pecten (Chlamys) fucanas Dall. Holotype. Miocene. Fuca Strait, Clallam Bay, Washington.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 704, pl. 26, fig. 7.

154186. Pecten gibbus amplicostatus Dall.

Cotypes.

Pliocene. Monroe County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 747.

r35779. Pecten (Pseudamusium) guppyi Dall. Cotypes.
Oligocene. Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 718, pl. 34, figs. 12, 13; and p. 755.

154485. Pecten (Chlamys) harrisii Dall. Holotype.
Pliocene. Caloosahatchie River, near Fort Thompson.
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 742, pl. 34, fig. 24.

13317. Pecten heermanni Conrad.

Holotype.

Miocene. California.

Conrad, Proc. Acad. Nat. Sci. Phila., VII, 1855, p. 267.—Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 701.

=Pecten (Lyropecten) hermanni.

See Pallium estrellanum.

7943. Pecten (Pecten) hemphillii Dall.

Cotypes.

Pliocene. San Diego, California.

Dall, Proc. U. S. Nat. Mus., I, 1878, p. 15; Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 706.

3657. Pecten illawarrensis Morris. Plesiotype.
Carboniferous. Harpers Hill on the Hunter, New South
Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 705, Atlas, pl. 9. fig. 9, 9a.

107754. Pecten (Chlamys) indecisus Dall.
Oligocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 744, pl. 34, fig. 3.

Pliocene. Deadman Island, off San Pedro, California.

Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 111, pl. 12, figs. 6, 7.

162523. Pecten (Chlamys) latiauritis fragilis Arnold. Holotype. Pleistocene. San Pedro, California.

Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 112, pl. 12, fig. 8.

3644. Pecten leniusculus Dana. Cotypes.
Carboniferous. District of Illawarra, New South Wales,
Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 704, Atlas, pl. 9, figs. 6a, 6b.

111606. Pecten madisonius Say.

Plesiotype.

Miocene. Shiloh, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Sury., 1894, p. 30, pl. 4, figs. 1-5.

135838. **Pecten madisonius sayanus** Dall. Holotype. Oligocene. Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 725, pl. 26, fig. 6.

13311. Pecten magnolia Conrad. Cotype.

Miocene. Santa Inez Mountains, Santa Barbara County, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 191.—Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 702.

= Pecten (Lyropecten) magnolia.

13333. Pecten meekii Conrad.

Cotypes.

Miocene. San Raphael Hills, Santa Barbara County, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 190, pl. 1, fig. 1.—Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 699.

=Pecten (Patinopecten) meeki.

4758. Pecten mitis Dana.

Holotype.

Carboniferous. Glendon on the Hunter, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 705, Atlas, pl. 9, figs. 8a, 8b.

358. Pecten nebrascensis Meek and Hayden. Cotypes.

Montana (Cret.). Yellowstone River, near Miles City,

Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 87. = Chlamys nebrascensis.

162524. Pecten (Plagioctenium) newsomi Arnold. Holotype.
Pleistocene. Los Cerritos, California.

Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 113, pl. 11, figs. 1, 1a.

137887. Pecten (Amusium) ocalanus Dall.

Oligocene. Levy County, Florida.

Dall, Trans, Wagner Free Inst. Sci. Phila., III, Pt. IV, p. 756, pl. 29, fig. 2.

7938. Pecten (Chlamys) opuntia Dall. Cotypes.

107752. Pliocene. San Diego County, California.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 707, pl. 29, fig. 6.

135786. Pecten (Chlamys) ornatus vaginulus Dall. Cotypes.
Oligocene. Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 715.

154479. Pecten (Chlamys) parmeleei Dall. Cotypes.
Pliocene. San Diego, California.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 708, pl. 37, figs. 14, 14a.

Oligocene. Near Baileys Ferry, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p.
755.

3504. Pecten propatulus Conrad. Holotype. Miocene. Astoria, Oregon.

Conrad, Wilkes U. S. Expl. Exped., X, 1849, p. 726, Atlas, pl. 18, figs. 13, a.—Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 699.

=Pecten (Patinopecten) propatulus.

30214. Pecten quinque costatus (Sowerby)? Plesiotypes. Buda (Lower Cret.). Near Austin, Texas.

Shattuck, Bull. No. 205, U. S. Geol. Surv., 1903, pl. 5, figs. 2-4.

107750. Pecten (Pecten) raveneli Dall.

Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 721, pl. 29, fig. 10.

Buda (Lower Cret.). Near Austin, Texas.

Shattuck, Bull. No. 205, U. S. Geol. Surv., 1903, p. 15, pl. 4, fig. 2.

Oligocene. Ponton, Santo Domingo, West Indies.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 715, pl. 34, fig. 4.

7942. Pecten (Pecten) stearnsii Dall. Holotype.
Pliocene. San Diego, California.

Dall, Proc. U. S. Nat. Mus., I, 1878, p. 14; Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 706, pl. 26, fig. 5.

61246. Pecten (Plagioctenium) subventricosus Dall. Cotypes. Pliocene. Ventura County, California.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 707, pl. 29, fig. 8.

115777. **Pecten** (Æquipecten) suwaneënsis Dall. Cotypes. Oligocene. Suwanee County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 734.

3658. Pecten tenuicollis Dana. Holotype. Carboniferous. Harpers Hill on the Hunter, New South

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 705, Atlas, pl. 9, figs. 7, 7a.

145991. Pecten tenuis Lea. Cotypes. Miocene. Jones's wharf, Patuxent River, Maryland.

Wales, Australia.

Lea, Trans. Am. Phil. Soc. (2), IX, 1845, p. 246, pl. 35, fig. 33.— Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 728.

=Pecten (Placopecten?) marylandicus.

30216. Pecten texanus Roemer. Plesiotypes. Buda (Lower Cret.). Near Austin, Texas.

Shattuck, Bull. No. 205, U. S. Geol. Surv., 1903, p. 17, pl. 5, figs. 6-8.

651. Pecten utahensis Meek. Cotype.
Upper Carboniferous. Summit Spring Pass, east of Eureka, Nevada.

Meek, Proc. Acad. Nat. Sci. Phila. for 1860, p. 310.

= Aviculopecten utahensis.

137612. Pecten (Chlamys) wahtubbeanus Dall. Holotype. Eocene. Indian Mound Railroad Cut, Newton County, Mississippi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 736, pl. 34, fig. 9.

140126. Pecten (wahtubbeanus var.?) willcoxii Dall. Holotype. Eocene. McLeod's mill, Clark County, Mississippi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 737, pl. 29, fig. 4.

350. Pectunculina parvula Meek and Hayden. Holotype and paratypes.

Montana (Cret.). Yellowstone River, near Miles City, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 85. =: Limopsis parvula.

23046. Pectunculus? ovatus Stanton. Cotypes.

Knoxville (Lower Cret.). Near Stephenson, 7 County, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 189 pl. 6, figs. 9, 10.

3605. Pectunculus patulus Conrad.

Holotype.

Miocene. Astoria, Oregon.

Conrad, Wilkes U. S. Expl. Exped., X, 1849, p. 726, Atlas, pl. 18, figs. 8, a.

309. Pectunculus subimbricatus Meek and Hayden. Cotypes Fox Hills (Cret.). Heart River, North Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1857, p. 146. — See Axinæa subimbricata.

28412. Pectunculus veatchi (Gabb).

Plesiotype.

Chico (Cret.). Pentz, California.

Stanton, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. I, 1897. p. 1039, pl. 64, fig. 1.

157830. Pectunculus veatchi major Stanton.

Cotypes.

Lower Tejon (Eocene). One mile southeast of Lower Lake, Lake County, California.

Stanton, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. I, 1897.
p. 1040, pl. 64, figs. 2, 3.

1868. Penitella spelæa Conrad.

Cotypes.

Post-Pliocene. San Pedro, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean. V, 1856, p. 326, pl. 5, figs. 43, 43a, 43b.

Pentacrinites. See Pentacrinus.

220. Pentacrinus asteriscus Meek and Hayden. Cotypes. Jurassic. Southwest base of Black Hills, South Dakota. Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Knowl. No. 172, XIV, 1864, p. 67, text figures.

- 682. Pentacrinus asteriscus Meek and Hayden. Plesiotypes.
  Jurassic. Southwest base of Black Hills, South Dakota.
  Clark, Bull. No. 97, U. S. Geol. Surv., 1893, p. 26, pl. 3, figs. 2a-d.
- 8588. Pentacrinus asteriscus Meek and Hayden.

  Jurassic. Salt Creek, near Nephi, Utah.

  Plesiotypes.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876. p. 162, pl. 13, figs. 6a, b.

8588. Pentacrinus whitei Clark. Cotypes.

Jurassic. Salt Creek and Diamond Valley, Utah.

Clark, Bull. No. 97, U. S. Geol. Surv., 1893, p. 27, pl. 3, figs. 4a-C

3647. Pentadia corona Dana.

Carboniferous. Harpers Hill on the Hunter, New South
Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 713, Atlas, pl. 10, figs. 10-10c, 11, 12.

17927. Pentamerella dubia Hall.

Plesiotype

Middle Devonian. Iowa City, Iowa.

Owen, Rept. Geol. Surv. Wisconsin, Iowa, and Minnesota, 1852 pl. 3 A, fig. 1 (as Atrypa n. s.?).

17929. **Pentamerus** (n. sp.?) Owen. Plesiotype. Middle Devonian. Near Davenport, Iowa.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, pl. 3 A, for II

=Gypidula comis.

1167. Pentamerus borealis Meek.

Holotype.

Base of Upper Devonian. Anderson River, Mackenzie River Basin, Canada.

Meek, Trans. Chicago Acad. Sci., I, 1868, p. 95, pl. 13, figs. 11a-h. = Pentamerella borealis.

13868. Pentamerus comis Owen.

Plesiotype.

13869. Middle Devonian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 159, pl. 3, figs. 4 and 7; pl. 14, figs. 15-15b; pl. 15, figs. 5-5b.

=Gypidula comis.

13867. Pentamerus lotis Walcott.

Cotype.

Upper Devonian. Applegate Canyon, White Pine District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 161, pl. 3, figs. 9-9c.

=Gypidula lotis.

24529. Pentremites bradleyi Meek.

Cotypes.

Lower Carboniferous. Divide between Ross Fork and Lincoln Valley, Montana.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 470, and footnote.—Hambach, Trans. St. Louis Acad. Sci., XIII, 1903, p. 56, pl. 5, fig. 7.

33071. Pentremites reinwardtii Troost.

Chirotypes.

Silurian. Decatur County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 60.

33072. Pentremites tennesseæ Troost. Chirotypes.
Lower Carboniferous. Craborchard Mountains, Tennessee.
Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 60.

115418. Periaster elongata Cotteau.

Holotype.

Eocene. St. Bartholomew, West Indies.

Cotteau, Kongl. Svenska Vet-Akad. Hand., XIII, 6, 1874, p. 27, pl. 5, fig 6.

36376. Periploma angulifera Philippi. Plesiotype. Pliocene. Shell Creek, near Charlotte Harbor, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1529, pl. 57, fig. 15.

115369. Peripneustes antillarum Cotteau.

Hol

Eocene. St. Bartholomew, West Indies.

Cotteau, Kongl. Svenska Vet-Akad. Hand., XIII, 6, xi pl. 7, figs. 1-3.

115410. Peripneustes clevei Cotteau. Holotype.

Miocene. Anguilla, West Indies.

Cotteau, Kongl. Svenska Vet-Akad. Harid., XIII, 6, 1874, p. 40, pl. 7, figs. 4-7.

- 30203. Perisphinctes filiplex (Quenstedt)? Plesiotypes.

  Jurassic. Moffats bridge, Tuolumne River, California.

  Hyatt, Bull. Geol. Soc. Amer., V, 1894, p. 423.
- 30202. Perisphinctes mühlbachi Hyatt. Holotype.
  Jurassic. Near Greenwood, El Dorado County, California.
  Hyatt, Bull. Geol. Soc. Amer., V, 1894, p. 426.
- 30204. Perisphinctes virgulatiformis Hyatt. Cotypes.

  Jurassic. Stanislaus River, opposite Bostwicks bar, California.

Hyatt, Bull. Geol. Soc. Amer., V, 1894, p. 422.

157841. Perissolax blakei (Conrad). Plesiotype.
Lower Tejon (Eocene). Army Point, near Benicia, California.

Stanton, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. I, 1897. p. 1045, pl. 67, fig. 1.

21254. Perissolax brevirostris Gabb. Plesiotype. Chico (Cret.). Near Pentz, California.

Stanton, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. 1, 1897.
p. 1047, pl. 67, fig. 4.

20103. Perna excavata White. Cotypes.
Nanaimo (Cret.). Lucia, Sheep Jack, and Waldron islands.
Gulf of Georgia.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 37, pl. 7, fig. 1.

13329. Perna montana Conrad. Holotype.

Miocene. San Buenaventura, Santa Barbara County,
California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 195.

43695. Peronopora uniformis Ulrich. Figured sections of holotype. Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 244, pl. 10, figs. 8, 8a.

= Peronopora compressa.

43943. Peronopora vera Ulrich.

Cotypes.

Utica (Ord.). Cincinnati, Ohio. Ulrich, Amer. Geol., X, 1888, p. 40.

111908. Perplicaria perplexa Dall. Holotype and plesiotype.

113217. Pliocene. Caloosahatchie River, near Fort Thompson, and Shell Creek, De Soto County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 90, pl. 3, fig. 1; Pt. II, 1892, p. 228, pl. 13, fig. 4.

43430. Petalotrypa compressa Ulrich. Cotypes and figured sections.

Middle Devonian. Rock Island, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 454, pl. 46, figs. 4-4f.

43431. **Petalotrypa delicata** Ulrich. Holotype and figured sections. Middle Devonian. Buffalo, Iowa.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 454, pl. 46, figs. 5, 5a.

43699. **Petigopora asperula** Ulrich. Cotypes and figured sections. Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 157, pl. 7, figs. 4-4a-c.

43700. Petigopora gregaria Ulrich. Cotypes and figured sections. Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 155, pl. 7, figs. 3, 3a-c.

43194. Petigopora offula Ulrich and Bassler. Cotypes. Cincinnatian (Ord.). Middletown, Ohio.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 32.

38205. Petrablattina hastata Scudder. Holotype. Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 141, pl. 11, fig. 10.

145740. Petricola (Petricolaria) calvertensis Dall. Holotype.

Miocene. Calvert Cliffs, Maryland.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1060, pl. 44, fig. 14.

145020. Petricola (Rupellaria) harrisii Dall. Holotype.
Miocene. Four and one-half miles above Yorktown, Virginia.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1060, pl. 43, fig. 1.

43271. Phacelopora constricta Ulrich. Holotype. Trenton (Ord.). Burgin, Kentucky.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 406, pl. 29, fig. 2.

43272. Phacelopora pertenuis Ulrich. Cotypes and figured sections.

Trenton (Ord.). Thebes, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 406, pl. 29, figs. 1b, 1c.

135719. Phacoides (Bellucina) actinus Dall.

Bowden (Oligocene). Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. 7 p. 1385, pl. 52, fig. 3.

157806. Phacoides (Pleurolucina) amabilis (Dall). Cotypes. Pliocene. Caloosahatchie, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1368.

See Lucina (Here) amabilis.

114684. Phacoides (Lucinisca) calhounensis Dall. Holotype. Chipola (Oligocene). Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1371, pl. 52, fig. 16.

157776. Phacoides (Miltha) caloosaënsis (Dall). Holotype. Pliocene. Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, It. VI, 1903, p. 1376.

See Lucina (Miltha) caloosaënsis.

114712. Phacoides (Miltha) chipolanus Dall. Holotype. Chipola (Oligocene). Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1375, pl. 51, fig. 11.

90906. Phacoides (Miltha) claibornensis (Conrad). Plesiotype. Claibornian (Eocene). Claiborne, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1374, pl. 50, fig. 18.

146288. Phacoides (Parvilucina) crenulatus (Conrad). Plesiotype. Upper Miocene. Suffolk, Virginia.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1383, pl. 52, fig. 12.

157640. Phacoides domingensis Dall. Holotype. Oligocene. Ballast Point, near Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1363, pl. 50, fig. 11.

114613. Phacoides (Here) glenni Dall. Holotype. Chipola (Oligocene). Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1566, pl. 50, fig. 17.

129633. Phacoides (Here) hamatus Dall. Holotype. Claibornian (Eocene). Claiborne Bluff, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1905, p. 1364, pl. 50, fig. 9.

114575. Phacoides (Miltha) heracleus Dall. Holotype. Chipola (Oligocene). Alum Bluff, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903.
p. 1376, pl. 51, fig. 10.

Phacoides (Parvilucina) intensus Dall. Holotype.
Pliocene. One hundred and sixty feet below surface in
City Park well, San Diego, California.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1385, pl. 50, fig. 8.

157822. Phacoides nassula caloosana Dall. Cotypes.
Caloosahatchie (Pliocene). Caloosahatchie River, southern Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1372.

112513. Phacoides (Miltha) ocalanus Dall. Holotype. Ocala (Oligocene). Ocala, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1375, pl. 50, fig. 14.

135863. Phacoides (Parvilucina) piluliformis Dall. Holotype.
 Oligocene. Oak Grove, Santa Rosa County, Florida.
 Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1382, pl. 52, fig. 6.

Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1371.

See Lucina plesiolopha.

Bowden (Oligocene). Bowden, Jamaica.

Bowden Warner For Just Col. Mail. W. P. W.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1365, pl. 50, figs. 12, 13.

157782. Phacoides (Parvilucina) prunus Dall. Holotype.
Miocene. Plum Point, Maryland.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1384, pl. 52, fig. 8.

135722. Phacoides (Pleurolucina) quadricostatus Dall. Holotype. Bowden (Oligocene). Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1368, pl. 50, fig. 7.

135721. Phacoides (Cavilucina) recurrens Dall. Holotype. Bowden (Oligocene). Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1369, pl. 52, fig. 11.

114686. Phacoides (Parvilucina) sphæriolus Dall. Holotype. Chipola (Oligocene). McDonald's ranch, Florida.

I)all, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 19 p. 1382, pl. 52, fig. 15. 135723. Phacoides (Here) tithonis Dall. Holotype. Bowden (Oligocene). Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1366, pl. 50, fig. 10.

115125. Phacoides (Bellucina) tuomeyi Dall. Holotype.

Miocene. Duplin County, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903.
p. 1385, pl. 52, fig. 1.

157789. Phacoides (Bellucina) waccamawensis Dall. Holotype.
Pliocene. Tillys Lake, Waccamaw, South Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903. p. 1386, pl. 52, fig. 2.

157756. Phacoides (Here) wacissanus Dall. Holotype. Oligocene. Ballast Point, near Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903.
p. 1365, pl. 50, fig. 15.

23880. Phacops braziliensis Clarke.

Cotypes.

Middle Devonian. Rio Maecuru, Brazil.

Clarke, Archivos do Mus. Rio de Janeiro, IX, 1890, p. 15, pl. 1. figs. 1, 2.

24432. Phacops crassimarginatus Hall. Plesiotype.
Middle Devonian. Three miles below Rockingham, Iowa.
Owen, Rept. Geol. Surv. Wis., Iowa and Minn., 1852, pl. 3A, fig. 6.
= Proetus crassimarginatus.

34124. Phacops hudsonicus Hall. Plesiotype.

Helderbergian (Dev.). Atoka quadrangle, Indian Territory.

Girty, Nineteenth Ann. Rept. U. S. Geol. Surv., 1900, p. 571. pl. 71, figs. 4a-4d.

23881. Phacops menurus Clarke.
Middle Devonian. Rio Maecuru, Brazil.

Plastotype.

Clarke, Archivos do Mus. Rio de Janeiro, IX, 1890, p. 17, pl. 1. fig. 15.

23886. Phacops scirpeus Clarke. Plastotype

Middle Devonian. Rio Maecuru, Brazil.

Clarke, Archivos do Mus. Rio de Janeiro, IX, 1890, p. 18, pl.: fig. 6.

43599. Phænopora incipiens Ulrich. Cotypes and figured sections 43600. Trenton (Ord.). Montreal, Canada, and Chimney Point Vermont.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Ed. 1893, p. 174, pl. 13, figs. 14-17.

43442. **Phænopora lindströmi** Ulrich. Holotype and figured sections.

Silurian. Island of Gotland, Sweden.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 392, fig. 12d.

43693. Phænopora (?) multipora Hall. Plesiotypes and figured sections.

Trenton (Ord.). Burgin, Kentucky.

Ulrich, Jour. Cincinnati Soc. Nat. Hist., V, 1882, p. 171, pl. 8, figs. 7, 7a, 7b.

=Eurydictya multipora.

43601. Phænopora wilmingtonensis Ulrich. Cotypes and figured sections.

Richmond (Ord.). Wilmington, Illinois.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 175, pl. 13, figs. 22-26.

112207. Phalium aldrichi Dall. Holotype. Oligocene. Ten-Mile Creek, Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 163; ibid., Pt. II, 1892, p. 263, pl. 21, fig. 2 (as Cassis (Phalium) aldrichi).

112203. Phalium globosum Dall. Cotypes. Upper Eocene. East of Newton, Mississippi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 161; ibid., Pt. II, 1892, p. 262, pl. 20, figs. 6, 11 (as Cassis (Phalium) globosum).

184. Pharella? dakotensis (Meek and Hayden). Holotype.

Dakota (Cret.). Just below mouth of Vermilion River,

South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 251, pl. 1, fig. 3. See Solen? dakotensis.

7821. Pharella? pealei Meek. Cotypes.
Colorado (Cret.). Missouri River, below Gallatin City,
Montana.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 496.— White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 21, pl. 11, figs. 6a, 6b.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 115, pl. 25, figs. 12, 13.

35373. Phillipsia trinucleata Herrick. Plesiotypes. Weber (Upper Carb.). Empire Hill, Leadville District, Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 478, pl. 10, figs. 11, 12.

24335. Pholadella parallela (Hall). Plesiotype

Middle Devonian. Ereré, Brazil.

Clarke, Archivos do Mus. Rio de Janeiro, X, 1899, p. 68, pl. in fig. 20.

See Grammysia (Pholadella?) parallela.

3643. Pholadomya (Homomya) audax Dana. Holotype.
Carboniferous. Wollongong Point, Illawarra, New South
Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 687, Atlas, pl. 3, figs. 1a-c.

12397. Ph[o]ladomya (Goniomya) borealis Meek. Holotype.
Nanaimo (Cret.). Nanaimo, Vancouver Island.

Meek, Trans. Albany Inst., IV, 1857, p. 42.

=Goniomya borealis

22895. Pholadomya coloradoensis Stanton. Cotypes. Colorado (Cret.). Williams Creek, Huerfano Park, Colorado.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 116, pl. 26, fig. 2.

3673. Pholadomya (Homomya) curvata Morris? Plesiotype.
Carboniferous. Wollongong Point, Illawarra, New South
Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 688, Atlas, pl. 3, figs. 2a, 2b.

25643. Pholadomya (Homomya) glendonensis Dana. Holotype.
Carboniferous. Glendon on the Hunter, New South
Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 687, Atlas, pl. 2, fig. 12.

217. Pholadomya humilis Meek and Hayden. Cotypes.

Jurassic. Southwest base of Black Hills, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila. for 1860, p. 182: Pal. Upper Mo., Smithsonian Cont. to Knowl. No. 172, XIV, 1864, p. 104, pl. 4, figs. 3a, 3b.

28956. Pholadomya inæquiplicata Stanton.

Holotye and paratypes.

Jurassic. Divide between Fawn Creek and Gallatin Valley, Yellowstone National Park.

Stanton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 625, pl. 74, fig. 4.

7815. Pholadomya kingii Meek. Holotype and plesiotype. 28957. Jurassic. Near Lower Canyon of Yellowstone River, Montana, and Yellowstone National Park.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883.
p. 150, pl. 38, figs. 3a, 3b.—Stanton, Mon. XXXII, Pt. II.
U. S. Geol. Surv., 1899, p. 624, pl. 74, figs. 1-3.

20251. Pholadomya occidentalis Morton. Plesiotype. Cretaceous. Hempstead County, Arkansas.

Owen, Second Rept. Geol. Reconn. of Arkansas, 1860, pl. 8, fig. 4

1910. Pholadomya papyracea Meek and Hayden. Holotype. Fort Benton (Cret.). Chippewa Point, near Fort Benton, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., 1862, p. 28.—Meek, Ninth Ann. Rept. U. S. Geol. Surv. Terr., 1876, p. 217, pl. 5, figs. 4a, b.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 116, pl. 26, fig. 1.

30236. Pholadomya roemeri Shattuck. Cotypes.

Buda (Lower Cret.). Near Austin, Texas.

Shattuck, Bull. No. 205, U. S. Geol. Surv., 1903, p. 28, pl. 15, figs. 3-6.

9859. Pholadomya sancti-sabæ (Roemer)? Plesiotype. Washita (Lower Cret.). Leon Springs, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 164, pl. 21, fig. 4.

1299. Pholadomya subelongata Meek. Cotypes.

Nanaimo (Cret.). Nanaimo, Vancouver Island.

Meek, Trans. Albany Inst., IV, 1857, p. 42; Bull. U. S. Geol. and Geogr. Surv. Terr., II, No. 4, 1876, p. 362, pl. 2, figs. 1, a.

181. Pholadomya subventricosa Meek and Hayden. Holotype. Fox Hills (Cret.). Mouth of Judith River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila. for 1857, p. 142.— Meek, Rept. U. S. Geol. Surv. Terr., IX; 1876, p. 217, pl. 39, figs. 8a, 8b.

9877. Pholadomya texana Conrad. Holotype.
Cretaceous. Turkey Creek, Loen, and Eagle Pass Road.

Cretaceous. Turkey Creek, Loen, and Eagle Pass Road, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 152, pl. 19, fig. 3.

187. Pholadomya undata Meek and Hayden. Holotype and paratype.

Fox Hills (Cret.). Mouth of Judith River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 81.

=Liopistha (Cymella) undata.

3639. Pholadomya (Platymya) undata Dana. Holotype.
Carboniferous. Wollongong Point, Illawarra, New South
Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 687, Atlas, pl. 2, figs. 11-11a, 11b.

259. Pholas cuneata Meek and Hayden. Holotype

Fox Hills (Cret.). Long Lake, North Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila. for 1858, p. 53. = Martesia cuneata.

13778. Pholidops bellula Walcott. Cotype.
Middle Devonian. Lone Mountain, near Eureka, Nevada.
Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 113, pl. 2, figs.
6, 6a, 6b.

13779. Pholidops quadrangularis Walcott. Holotype.
Middle Devonian. Lone Mountain, near Eureka, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 114, pl. 2, fig. 7.

[This is the plate of a crinoid.]

115638. Phorus delectus Guppy. Holotype.

Miocene. Jamaica, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXXII, 1876, p. 529, pl. 28, fig. 10.

12510. Phorus exoneratus White.

Eocene. Bijou Basin, forty miles east of Denver, Colorado.

White, Powell's Rept. Geol. Uinta Mountains, 1876, p. 134.

[The locality given is erroneous and the true locality is unknown.

See Eleventh Ann. Rept. U. S. Geol. Surv. Terr., pp. 191, 192.

T. W. Stanton.]

135146. Phos albirupina Harris. Cotypes. Eocene. White Bluff, Arkansas River, Arkansas.

Harris, Ann. Rept. Geol. Surv. Arkansas, Pt. II, 1894, p. 166, pl. 6, fig. 5.

Oligocene. Calhoun County, Florida.

Dall, Proc. U. S. Nat. Mus., XIX, 1896, p. 311.

Miocene. Jamaica, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 290, pl. 16, fig. 13.

115487. **Phos erectus** Guppy. Holotype. Oligocene. Jamaica, British West Indies. Guppy, Geol. Mag., London, Dec. II, I, 1874, p. 410, pl. 16, fig. 1.

Oligocene. Potrero, Rio Amina, Santo Domingo, West Indies.

Dall, Proc. U. S. Nat. Mus., XIX, 1896, p. 311, pl. 28, fig. 12.

Oligocene. Potrero, Rio Amina, Santo Domingo, West Indies.

Dall, Proc. U. S. Nat. Mus., XIX, 1896, p. 310, pl. 29, fig. 4.

135145. Phos hilli Harris.

Eocene. Near Vinces Bluff, Arkansas River, Arkansas.

Harris, Ann. Rept. Geol. Surv. Arkansas, Pt. II, 1894, p. 167, pl. 6, fig. 6.

147036. **Phos johnsoni** Vaughan. Holotype. Jacksonian (Eocene). Jackson, Louisiana.

Vaughan, Bull. No. 142, U. S. Geol. Surv., 1897, p. 36, pl. 3, fig. 3.

Oligocene. Ponton, Santo Domingo, West Indies.

Dall, Proc. U. S. Nat. Mus., XIX, 1896, p. 310, pl. 28, fig. 15.

Miocene. Jamaica, British West Indies.

Guppy, Quart. Journ. Geol Soc. London, XXII, 1866, p. 290, pl.

Guppy, Quart. Journ. Geol Soc. London, XXII, 1866, p. 290, pl. 16, fig. 11.

38157. Phthanocoris occidentalis Scudder. Cotypes.
Upper Coal Measures. Kansas City, Missouri.
Scudder, Mem. Boston Soc. Nat. Hist., III, 1885, p. 348, pl. 32, fig. 4; Foss. Insects N. America, I, 1890, p. 312, pl. 18, fig. 4.

25510. **Phyllobius antecessor** Scudder. Holotype. Older Tertiary. Roan Mountains, western Colorado. Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 57, pl. 9, fig. 16.

25507. Phyllobius avus Scudder. Holotype.
Older Tertiary. White River, Colorado and Utah.
Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 58, pl. 9, fig. 17.
= Phyllobius carcerarius.

25509. Phyllobius carcerarius Scudder. Cotypes.
Older Tertiary. White River, Colorado and Utah.
Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 57, pl. 9, fig. 11.
See Phyllobius avus.

384. Phylloceras? halli (Meek and Hayden). Holotype. Fort Pierre (Cret.). Missouri River, one hundred and fifty miles above mouth of Milk River, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 458, pl. 24, figs. 3a-c.

See Ammonites? halli.

23083. Phylloceras knoxvillensis Stanton. Holotype and paratype.
23084. Knoxville (Lower Cret.). One mile northwest of Cooper
Ranch, Tehama County, and three miles northwest of
Paskenta, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 72, pl. 14, figs. 1-4.

12451. Phylloceras? ramosus Meek. Holotype.
Nanaimo (Cret.). Komooks, Vancouver Island.

Meek, Bull. U. S. Geol. and Geogr. Surv. Terr., II, 1876, p. 3.

Meek, Bull. U. S. Geol. and Geogr. Surv. Terr., II, 1876, p. 3, pl. 5, figs. 1, a, b.

See Ammonites (Scaphites?) ramosus.

43705. Phyllodictya frondosa Ulrich. Cotypes and figured sections. Stones River (Ord.). High Bridge, Kentucky.

> Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 174, pl. 8, figs. 11, 11a, 11b.

43598. Phyllodictya frondosa Ulrich? Plesiotypes. Stones River (Ord.). Minneapolis, Minnesota.

> Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I. 1893, p. 142.

43597. Phyllodictya varia Ulrich. Cotypes and figured sections. Black River (Ord.). St. Paul, Minnesota.

> Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 144, pl. 14, figs. 1-8.

15314. Phyllograptus ?? cambrensis Walcott. Holotype. Lower Cambrian. Parker's Quarry, Georgia, Vermont.

> Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 604, pl. 59, figs. 3, 3a.

> > Holotype.

See Diplograptus? simplex.

Phyllopora? sp. indet. Ulrich=Reteporella cinctata.

43433. Phyllopora aspera Ulrich.

Onondaga (Dev.). Falls of the Ohio. Ulrich, Geol. Surv. Ill., VIII, 1890, p. 613, pl. 44, figs. 5-5b.

43435. Phyllopora superba Ulrich. Cotypes and figured sections. Hamilton (Dev.). Erie County, New York.

> Ulrich, Geol. Surv. Ill., VIII, 1890, p. 613, pl. 44, figs. 6-6c; pl. 55, figs. 9, 9a.

= Reteporella perundata.

43704. Phyllopora variolata Ulrich.

Holotype. Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 160, pl. 6, fig. 14.

=Phylloporina variolata.

43438. Phylloporina aspera (Hall). Plesiotype and figured sections.

Chazy (Ord.). Mingan, Canada.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 639, pl. 53, figs. 4-4c.

43441. Phylloporina asperato-striata (Hall). Plesiotype and figured sections. Rochester (Sil.). Lockport, New York.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 332, pl. 53, figs. 5-5d.

43437. Phylloporina corticosa Ulrich. Cotypes. Black River (Ord.). Cannon Falls, Minnesota.

> Ulrich, Geol. Surv. Ill., VIII, 1890, p. 639, pl. 53, figs. 3, 34 Geol. and Nat. Hist. Surv. of Minn., Final Rept., III, Pt. 1. 1893, p. 212, pl. 5, figs. 1-10.

43439. Phylloporina dawsoni Ulrich.

Cotypes.

Trenton (Ord.). Montreal, Canada.

Ulrich, Geol. Surv. Ill., VIII, 1890, pl. 54, figs. 1-1i.

43696. Phylloporina halli Ulrich.

Cotypes.

Black River (Ord.). St. Paul, Minnesota.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XII, 1890, p. 181, figs.
 7-7f; Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 211, pl. 4, figs. 16-21.

43731 Phylloporina reticulata (Hall). Plesiotypes and figured to sections.

43733. Trenton (Ord.). Trenton Falls, New York.
Black River (Ord.). Cannon Falls and Minneapolis,
Minnesota.

Ulrich, Geol. Surv. Ill., VIII, 1890, pl. 53, figs. 2, 2a; Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 210, pl. 4, figs. 8-15.

43697. Phylloporina sublaxa Ulrich.

Cotypes.

43698. Stones River (Ord.). Lebanon, Tennessee, and Minneapolis, Minnesota.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XII, 1890, p. 179, figs. 6-6f; Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 209, pl. 4, figs. 1-7.

43440. Phylloporina trentonensis (Nicholson). Plesiotype and figured sections.

Trenton (Ord.). Belleville, Canada.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 640, pl. 53, figs. 1-1c.

414. Phylloteuthis subovata Meek and Hayden. Holotype. Fox Hills (Cret.). Moreau River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1860, p. 176.— Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 505, pl. 33, fig. 3.

Physa sp. White=P. usitata.

8596. Physa bridgerensis Meek?

Plesiotypes.

Eocene. San Pete Valley, Utah.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 210, pl. 21, fig. 2a.

9001. Physa bridgerensis Meek.

Plesiotype.

Bridger (Eocene). Near Fort Bridger, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883,
p. 45, pl. 19, figs. 10a, 10b; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 450, pl. 30, figs. 9, 10.

20069. Physa bullata White.

Coty

Eocene. Wales, Utah.

White, Bull. No. 34, U. S. Geol. Surv., 1886, p. 25, pl. 3, 1 14-16, ?17.

7875. Physa carletoni Meek.

Holotype.

Montana (Cret.). Coalville, Utalı.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 508.—
White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879,
p. 306, pl. 7, fig. 12; Third Ann. Rept. U. S. Geol. Surv., 1883,
p. 449, pl. 5, fig. 18.

12470. Physa copei White.

Cotypes.

Laramie (Cret.). Cow Island, Missouri River, Montana.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883,
p. 85, pl. 24, figs. 4a, 4b; Third Ann. Rept. U. S. Geol. Surv..
1883, p. 450, pl. 25, figs. 1, 2.

9054. Physa felix White.

Cotypes.

Laramie (Cret.). Crow Creek, northern Colorado.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 84, pl. 22, fig. 1a; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 450, pl. 25, fig. 3.

8890. Physa kanabensis White.

Cotypes.

Laramie (Cret.). Upper Kanab, Utah.

White, Powell's Rept. Geol. Uinta Mountains, 1876, p. 119.

20068. Physa kanabensis White?

Plesiotypes.

Eocene. Wales, Utah.

White, Bull. No. 34, U. S. Geol. Surv., 1886, p. 24, pl. 3, figs. 11-13.

2120. Physa longiuscula Meek and Hayden.

Holotype and

paratypes.

[aramie (Cret ) Three miles below Fort Union North

Laramie (Cret.). Three miles below Fort Union, North Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 119. = Bulinus longiusculus.

112561. Physa meigsii Dall.

2121.

Holotype.

Pliocene. Caloosahatchie River, near Fort Thompson. Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III. Pt. I, 1890, p. 22 pl. 10, fig. 12.

8867. Physa pleromatis White.

Cotypes.

8876. Eocene. Last Bluff, Utah.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876 p. 211, pl. 21, figs. 1a, b; Third Ann. Rept. U. S. Geol. Surv. 1883, p. 450, pl. 30, figs. 6-8.

20067. Physa pleromatis White.

Plesiotype

Eocene. Wales, Utah.

White, Bull, No. 34, U. S. Geol, Surv., 1886, p. 24, pl. 3, figs. 24.

33304. Physa prisca Walcott.

Holotype

Lower Carboniferous. New York and Richmond Mountains, Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 262, fig. 6.

19181. Physa rhomboidea Meek and Hayden. Holotype.

Laramie (Cret.). Three miles below Fort Union, North
Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 119. = Bulinus rhomboideus.

2140. Physa secalina Evans and Shumard. Holotype. White River (Miocene). Pinots Creek, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 604, pl. 45, figs. 4a, 4b.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 450, pl. 32, figs. 35, 36.

2118. Physa subelongata Meek and Hayden. Holotype.

Laramie (Cret.). Bad Lands of Judith River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci., Phila., VIII, 1856, p. 120.

= Bulinus subelongatus.

12484. Physa usitata White. Cotypes.
22328. Bear River (Cret.). Sulphur Creek and twenty miles north of Cokeville, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 85, pl. 30, fig. 11 (as Physa sp.?); Third Ann. Rept. U. S. Geol. Surv., 1883, p. 449, pl. 6, fig. 17 (as Physa sp.?); Bull. No. 128, U. S. Geol. Surv., 1895, p. 47, pl. 6, figs. 8, 9.

25505. **Phyxelis dilapsus** Scudder. Holotype. Older Tertiary. Green River, Wyoming.

Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 41, pl. 8, fig. 11.

25501. Phyxelis eradicatus Scudder. Cotype.
Older Tertiary. Roan Mountains, western Colorado.
Scudder, Mon. XXI, U.S. Geol. Surv., 1893, p. 43, pl. 8, figs. 17, 18.

25503. Phyxelis evigoratus Scudder. Cotype.
25504. Older Tertiary. White River, Utah, and Roan Mountains, western Colorado.

Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 42, pl. 8, figs. 13, 14, 15.

25506. Phyxelis excissus Scudder. Holotype.
Older Tertiary. Roan Mountains, western Colorado.
Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 42, pl. 8, fig. 16.

3659. Pileopsis tenella Dana. Holotype.
Carboniferous. Harpers Hill on the Hunter, New South
Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 706, Atlas, pl. 9 figs. 13a-13b.

153824. Pinna caloosaënsis Dall.

Pliocene. Caloosahatchie River, near Fort Thompse
Florida

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 6 pl. 26, fig. 4.

14367. Pinna consimilis Walcott.

Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 236, pl. 20, fig. 13.

14368. Pinna inexpectans Walcott. Cotype.

Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 235, pl. 19, fig. 11.

20221. Pinna kingii Meek. Holotype. Jurassic. Weber Canyon, Wahsatch Range, Utah.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 131, pl. 12, figs. 9, 9a.

8486. Pinna peracuta Shumard? Plesiotype.

Upper Carboniferous. Mesa edge, near Relief Spring.

Arizona.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 151, pl. 11, fig. 5a.

12198. Pinna peracuta Shumard. Plesiotype.
Upper Carboniferous. Twelve miles west of Plattsmouth,
Nebraska.

White, Thirteenth Ann. Rept. Geol. Surv. Indiana, 1884, p. 145. pl. 28, figs. 1, 2.

8640. Pinna petrina White. Cotypes. Colorado (Cret.). One mile south of Pajuate, New Mexico.

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 1874, p. 24; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 182, pl. 13, figs. 7a, b.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 88, pl. 20, fig. 1.

8101. Pinna petrina White.

Cotypes.

Colorado (Cret.). Near Fort Wingate, New Mexico.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 88, pl. 19, fig. 4.

See Pinna stevensoni.

112508. Pinna quadrata Dall.

Holotype.

Cotype.

Oligocene. Ocala, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 660, pl. 29, fig. 7.

8101. Pinna stevensoni White. Holotype.

Colorado (Cret.). Near Fort Wingate, New Mexico.

White, Proc. U. S. Nat. Mus., III, 1880, p. 47.

= Pinna petrina.

43428. Pinnatopora conferta Ulrich.

Cotype.

Keokuk (Miss.). Keokuk, Iowa.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 618, pl. 56, fig. 5; pl. 66, fig. 6.

43488. Pinnatopora curvata Ulrich. Holotype. Waverly (Miss.). Richfield, Ohio.
Ulrich, Bull. Denison Univ., IV, 1888, p. 76, pl. 14, fig. 4.

- 43423. Pinnatopora elegans Young and Young. Figured sections of plesiotype.

  Carboniferous. Scotland.

  Ulrich, Geol. Surv. Ill., VIII, 1890, pl. 56, fig. 2.
- 43427. Pinnatopora flexuosa Ulrich. Plesiotype. Keokuk (Miss.). Kings Mountain, Kentucky.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 616, pl. 66, figs. 4-4c.
- 43486. Pinnatopora intermedia Ulrich. Holotype. Waverly (Miss.). Richfield, Ohio.

  Ulrich, Bull. Denison Univ., IV, 1888, p. 74, pl. 14, fig. 1.
- 43421. Pinnatopora laxa Young and Young. Figured sections of plesiotype.

  Carboniferous. Scotland.

  Ulrich, Geol. Surv. Ill., VIII, 1890, pl. 56, figs. 4, 4a.
- 43487. Pinnatopora minor Ulrich. Cotypes. Waverly (Miss.). Richfield, Ohio.

  Ulrich, Bull. Denison Univ., IV, 1888, p. 77, pl. 14, figs. 7, 7a.
- 43422. Pinnatopora retroflexa Young and Young. Figured sections of plesiotype.

  Carboniferous. Scotland.

  Ulrich, Geol. Surv. Ill., VIII, 1890, pl. 56, fig. 3.
- 43489. Pinnatopora simulatrix Ulrich. Holotype. Waverly (Miss.). Richfield, Ohio.
  Ulrich, Bull. Denison Univ., IV, 1888, p. 75, pl. 14, fig. 3.
- 43424. Pinnatopora trilineata Meek. Figured section of plesiotype. Upper Coal Measures. Springfield, Illinois.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 620, pl. 66, fig. 6.
- 43490. Pinnatopora vinei Ulrich, Holotype. Waverly (Miss.). Richfield, Ohio.
  Ulrich, Bull. Denison Univ., IV, 1888, p. 77, pl. 14, fig. 5.
- 43426. Pinnatopora vinei Ulrich. Plesiotype. Keokuk (Miss.). Kings Mountain, Kentucky.
  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 616, pl. 66, figs. 5-5b.
- 43492. Pinnatopora whitii Foerste. Plastot Lower Coal Measures. Flint Ridge, Ohio.

  Foerste, Bull. Sci. Lab. Denison Univ., II, 1887, p. 87, pl. 7, 4a-c.

- 43491. Pinnatopora youngi Ulrich. Cotype.
  Waverly (Miss.). Richfield, Ohio.
  Ulrich, Bull. Denison Univ., IV, 1888, p. 78, pl. 14, figs. 6, 6a.
- 43425. Pinnatopora youngi Ulrich. Plesiotype. Keokuk (Miss.). Kings Mountain, Kentucky.
  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 615, pl. 66, fig. 3.
- 113224. Pisania (Celatoconus) nux Dall. Holotype.

  Miocene. Cape Fear River, North Carolina.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892.
  p. 235, pl. 13, fig. 6.
- 8208. Pisidium saginatum White. Cotypes.

  Laramie (Cret.). Near Evanston, Wyoming.

  White, Powell's Rept. Geol. Uinta Mountains, 1876, p. 128; Third
- 136750. Pitaria (Lamelliconcha) calcanea Dall. Holotype.
  Oligocene. Vicksburg, Mississippi.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903,
  p. 1270, pl. 55, fig. 19.
- 115163. Pitaria (Lamelliconcha) filosina Dall. Holotype.
  Upper Miocene. Natural Well, Duplin County, North
  Carolina.
  - Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903. p. 1270, pl. 57, fig. 1.

Ann. Rept. U. S. Geol. Surv., 1883, p. 440, pl. 20, figs. 14, 15.

- 114753. Pitaria (Hyphantosoma) floridana Dall. Holotype. Chipola (Oligocene). Alum Bluff, Apalachicola River, Florida.
  - Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1267, pl. 54, fig. 10.
- 135252. Pitaria (Lamelliconcha) hillii Dall. Holotype.
  Oligocene. Near Gatun, Panama Canal, Panama.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903,
  p. 1268, pl. 54, fig. 7.
- 109232. Pitaria (Hyphantosoma) opisthogrammata Dall.

  Holotype.

  Pliocene. Near Charlotte Harbor, Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903.
  p. 1267, pl. 54, fig. 8.
- 29414. Placenticeras guadalupe (Roemer). Plesiotypes. San Carlos (Upper Cret.). San Carlos, Presidio Co., Texas. Hyatt, Mon. XLIV, U. S. Geol. Surv., 1903, p. 199.
- 9735. Placenticeras intercalare Meek. Plesiotypes.
  18978. Montana (Upper Cret.). Harper, Laramie Plains, Wyoming; Ponil Canyon, New Mexico; Upper Missouri.
  Hyatt, Mon. XLIV, U. S. Geol. Surv., 1903, pp. 207-211, pl. 36,
  fig. 5; pl. 37, figs. 1-4; pl. 38, fig. 1.

411. Placenticeras (Sphenodiscus) lenticulare (Owen).

Plesiotypes.

Fox Hills (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 473, pl. 34, fig. 1a, and text fig. 66.

388. Placenticeras placenta (DeKay). Plesiotypes.

3680. Fort Pierre (Cret.). Cheyenne River, South Dakota, and North Red River, Minnesota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, pp. 465-468, fig. 65 in text, and pl. 24, figs. 2a, 2b.

22939. Placenticeras placenta (DeKay)? Plesiotypes.
Colorado (Cret.) Upper Kanab Valley, Utah.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 169, pl. 39, figs. 1-3.

Fig. 1 = Placenticeras pseudoplacenta. Figs. 2, 3 = Placenticeras stantoni.

369. Placenticeras placenta intercalare Meek and Hayden.

Holotype.

Fort Pierre (Cret.). Cheyenne River at mouth of Sage Creek, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 468, pl. 23, figs. 1a-c.

See Ammonites placenta intercalaris.

21651. Placenticeras planum Hyatt.

Texas.

Cotypes.

Cotype.

29410. San Carlos (Upper Cret.). San Carlos, Presidio County, Texas; Presidio del Norte, Mexico.

Hyatt, Mon. XLIV, U. S. Geol. Surv., 1903, p. 202, pl. 33, figs. 2-4; pl. 34, figs. 1-3.

22344. Placenticeras pseudoplacenta Hyatt. Cotype. Colorado (Upper Cret.). Upper Kanab Valley, Utah.

Hyatt, Mon. XLIV, U. S. Geol. Surv., 1903, pp. 216, 217, pl. 43, figs. 3-10.

See Placenticeras placenta?

22199. Placenticeras pseudoplacenta Hyatt.

Fort Benton (Upper Cret.). Muddy Creek, Huerfano County, Colorado.

Hyatt, Mon. XLIV, U. S. Geol. Surv., 1903, pp. 216, 217, pl. 43, fig. 11.

29411. Placenticeras sancarlosense Hyatt. Cotypes. San Carlos (Upper Cret.). San Carlos, Presidio County,

Hyatt, Mon. XLIV, U. S. Geol. Surv., 1903, p. 200, pl. 30, figs. 1-3, pl. 31, figs. 1, 2.

22939. Placenticeras stantoni Hyatt. Holo Colorado (Upper Cret.). Upper Kanab Valley, Utah

Hyatt, Mon. XLIV, U. S. Geol. Surv., 1903, p. 214.

See Placenticeras placenta?

1394. Placenticeras? vancouverensis (Meek). Holotype.
Nanaimo (Cret.). Komooks, Vancouver Island.

Meek, Bull. U. S. Geol. and Geogr. Surv. Terr., II, 1876, p. 376, pl. 6, figs. 1a-c.

See Ammonites vancouverensis.

18936. Placenticeras whitfieldi Hyatt.

Cotype.

Montana (Upper Cret.). Upper Missouri.

Hyatt, Mon. XLIV, U. S. Geol. Surv., 1903, pp. 221-232, pl. 47. figs. 1, 2.

41364. Placentula marginata Ulrich.

Holotype.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 124, pl. 10, figs. 13a-c.

115422. Placocythus barretti Duncan.

Cotypes.

Miocene. Jamaica, West Indies.

Duncan, Quart. Journ. Geol. Soc. London, XIX, 1863, p. 437, pl. 16, fig. 1.

115425. Placocythus morei Duncan.

Plesiotype.

Miocene. Jamaica, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXI, 1865, 1866, p. 16, pl. 2, fig. 1.

115423. Placotrochus alveolus Duncan.

Holotype.

Miocene. Jamaica, West Indies.

Duncan, Quart. Journ. Geol. Soc. London, XIX, 1863, p. 438, pl. 16, fig. 2.

135778. Placunanomia lithobleta Dall.

Cotypes.

Oligocene. Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 778.

8082. Placunopsis hilliardensis White.

Cotypes.

Colorado? (Cret.). Hilliard Station, Wyoming.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terrs., 1879.p. 278, pl. 7, fig. 14a.—Stanton Bull. No. 106, U. S. Geol. Surv., 1893, p. 68, pl. 8, fig. 11.

115370. Plagionotus loveni Cotteau.

Holotype.

Eccene. St. Bartholomew, West Indies.

Cotteau, Kongl. Svenska Vet-Akad. Hand., XIII, 6, 1874, p. 41, pl. 8, figs. 7, 8.

115492. Planaxis crassilabrum Guppy.

Holotype.

Pliocene. Trinidad, British West Indies.

Guppy, Geol. Mag., London, Dec. II, I, 1874, p. 411, pl. 18, fig. 13.

18360. Planolites annularis Walcott.

Holotype

Lower Cambrian. Near North Greenwich, Washington County, New York.

Walcott, Proc. U. S. Nat. Mus., XII, 1889, p. 34; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 602, pl. 60, fig. 5.

- 33796. Planolites corrugatus Walcott. Holotype. Greyson (Algonkian). Near Neihart, Montana.

  Walcott, Bull. Geol. Soc. Amer., X, 1899, p. 236, pl. 24, fig. 8.
- 33797. Planolites superbus Walcott. Cotypes.
  Greyson (Algonkian). Near Neihart, Montana.
  Walcott, Bull. Geol. Soc. Amer., X, 1899, p. 237, pl. 24, fig. 9.
- 8909. Planorbis æqualis White. Cotypes. Eocene. Henrys Fork, Green River, Wyoming.

  White, Proc. U. S. Nat. Mus., III, 1880, p. 159; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 448, pl. 29, fig. 10.
- 13392. Planorbis ammon Gould. Holotype.
  Post-Tertiary. Colorado Desert, California.

  Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean,
  V, 1856, p. 331, pl. 11, figs. 14-16.
- 2105. Planorbis amplexus Meek and Hayden. Holotype.

  Laramie (Cret.). Near mouth of Judith River, Montana.

  Meek and Hayden, Proc. Acad. Nat. Sci. Phila. for 1857, p. 135.
- 2105. Planorbis (Bathyomphalus) amplexus (Meek and Hayden.)
  Paratypes.
  Laramie (Cret.) Near mouth of Judith River, Montana.
  Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 539.
- Green River (Eocene). Three miles east of Table Rock Station, Wyoming.

  White Twelfth Ann Rept. II. S. Cool. Surv. Terr. Pt. 1, 1980.
  - White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 44, pl. 19, figs. 5a-c; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 448, pl. 29, fig. 7.
- Pliocene. 'Caloosahatchie River, near Fort Thompson, Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 20, pl. 10, fig. I, 1a.
  - 1985. Planorbis convolutus Meek and Hayden. Holotype and paratypes.

    Laramie(Cret.). Little Horn and Powder rivers, Montana.

    Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 120.—Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 536, pl. 42, figs. 12a, 12b.
  - 2176. Planorbis convolutus var. Meek and Hayden. Cotypes.
    Laramie (Cret.). Little Horn and Powder rivers, Montana.

    Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 538, pl. 4
    figs. 11a-e.—White, Third Ann. Rept. U. S. Geol. Surv., 188
    p. 447, pl. 27, fig 16.

112548. Planorbis disstoni Dall. Holotre

Pliocene. Caloosahatchie River, near Fort Thompse. Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, in p. 21, pl. 10, figs. 2, 2a.

2182. Planorbis fragilis Meek and Hayden. Holotva Fort Union (Cret.). Fort Berthold, North Dakota.

> Meek and Hayden, Proc. Acad. Nat. Sci. Phila. for 1857, p. 35 = Planorbis (Bathyomphalus) planoconvexus.

12506. Planorbis (Bathyomphalus) kanabensis White. Cotype Laramie (Cret.). Upper Kanab, Utah.

> White, Powell's Rept. Geol. Uinta Mountains, 1876, p. 13 Third Ann. Rept. U. S. Geol. Surv., 1883, p. 447, pl.: figs. 21-23.

2170. Planorbis nebrascensis Evans and Shumard. White River (Miocene). Pinots Creek, South Dakota

> Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 600, pl. figs. 2a, 2b,—White, Third Ann. Rept. U. S. Geol. Surv. 1883, p. 448, pl. 32, figs. 22, 23.

2182. Planorbis (Bathyomphalus) planoconvexus (Meek m Hayden). Holoty:

Laramie (Cret.). Fort Berthold, North Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 538, pl. 1 figs. 9a-c.-White, Third Ann. Rept. U. S. Geol. Surv. 1981 p. 447, pl. 27, figs. 17, 18.

See Planorbis fragilis.

22336. Planorbis præcursoris White.

Cotype Bear River (Cret.). Twenty miles north of Cokeville

White, Bull. No. 128, U. S. Geol. Surv., 1895, p. 46, pl. 6, figs.:

604. Planorbis spectabilis Meek.

Wyoming.

Cotype

Hams Fork, northeast of Fort Bridger, Wyomin, Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 74

pl. 17, figs. 13d-f.

695. Planorbis spectabilis Meek.

Cotype

Hams Fork, northeast of Fort Bridger, Wyomin Eocene. Meek, Rept. Expl. Great Basin of Utah, Simpson, 1876, p. 7 pl. 5, figs. 7a-d.

See Planorbis utaliensis spectabilis.

697. Planorbis spectabilis utahensis (Meek).

Cotyre

Hams Fork, northeast of Fort Bridger, Wyom

Meek, Rept. Expl. Great Basin of Utah, Simpson, 1876. p. ? pl. 5, figs. 8a-e; Rept. U. S. Geol. Expl. 40th Par., IV. P. 1877, p. 190, pl. 17, figs. 14a-14c.

See Planorbis utaliensis.

697. Planorbis utahensis Meek.

Cotypes.

Eocene. Hams Fork, northeast of Fort Bridger, Wyoming.

Meek, Proc. Acad. Nat. Sci. Phila. for 1860, p. 314.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 447, pl. 29, figs. 1-3.

= Planorbis spectabilis utahensis.

8599. Planorbis utahensis Meek.

Plesiotypes.

Eocene. East slope of Pine Mountains and Castle Valley, Utah.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 209, pl. 21, fig. 8a.

= Planorbis spectabilis utahensis.

695. Planorbis utahensis spectabilis (Meek). Cotypes. Eocene. Hams Fork, northeast of Fort Bridger, Wyoming.

White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 447, pl. 29, figs. 4-6.

=Planorbis spectabilis.

317. Planorbis veternus Meek and Hayden.

Cotypes.

Jurassic. Southwest base of Black Hills, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila. for 1860, p. 418 (nomen nudem); Pal. Upper Mo., Smithsonian Cont. to Knowl. No. 172, XIV, 1864, p. 107, pl. 4, figs. 1a, 1b.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 446, pl. 3, fig. 6.

20057. Planorbis veternus Meek and Hayden? Plesiotype.

Jurassic. Eight miles north of Canyon City, Colorado.

White, Bull No. 29, U. S. Geol. Surv., 1886, p. 21, pl. 4, figs. 20, 21.

2171. Planorbis vetulus Meek and Hayden.

Holotype.

White River (Miocene). Pinots Creek, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila. for 1860, p. 175.

= Planorbis vetustus.

2171. Planorbis vetustus Meek and Hayden.

Holotype.

White River (Miocene). Pinots Creek, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 601, pl. 45, figs. 1a-c.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 448, pl. 32, figs. 16-18.

See Planorbis vetulus.

11938. Planorbis willcoxii Dall.

Holotype.

Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 4, pl. 1, figs. 6c, 6d.

28140. Plasmopora lambii Schuchert.

Cotypes.

Trenton (Ord.). Head of Frobisher Bay, Baffin Land.

Schuchert, Proc. U. S. Nat. Mus., XXII, 1900, p. 154.

- 13929. Platyceras conradi Walcott. Cotypes.
  Middle Devonian. Combs Peak, Eureka District, Nevada.
  Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 182, pl. 16, figs. 1, 12
- 45954. Platyceras? depressum Ulrich and Scofield. Holotype.
  Black River (Ord.). Near Cannon Falls, Minnesota.

  Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1069, pl. 61, figs. 55, 56.
- 23846. Platyceras hoyti Walcott. Holotype.
  Upper Cambrian. Four miles west of Saratoga Springs,
  New York.

Walcott, Proc. U. S. Nat. Mus., XIII, 1890, p. 268, pl. 20, fig. 8.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 183, pl. 6, figs. 5-5b.

8504. Platyceras nebrascense Meek. Plesiotypes.
 8505. Upper Carboniferous. Near Santa Fé, New Mexico, and Nebraska City, Nebraska.
 White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876.

p. 159, pl. 12, figs. 5a-5d.

- 13926. Platyceras nodosum Conrad. Plesiotype.
  Middle Devonian. Lone Mountain, near Eureka, Nevada.
- 14405. Platyceras occidens Walcott. Cotype. Lower Carboniferous. Eureka District, Nevada. Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 254, pl. 24, figs. 9, 9a.
- 35362. Platyceras parvum Swallow. Plesiotypes.

  Hermosa (Upper Carb.). Sandstone Mountain, Rico
  quadrangle, and Bear Creek, Needle Mountain quadrangle, Colorado.

  Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 461, pl. 16.

figs. 1, 1a; 2, 2a.

63, fig. 1.

- 14406. Platyceras piso Walcott.

  Lower Carboniferous. Eureka District, Nevada.

  Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 254, pl. 24, figs. 7-7b.
- 15371. Platyceras primævum Billings. Plesiotype Lower Cambrian. Troy, New York.

  Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 130, pl. 12, figs. 5, 5a; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 618, pl. 74, figs. 11, 11a.
- 35217. Platyceras primordialis Hall? Plesiotype Middle Cambrian. Soda Butte Creek, Yellowstone National Park.

  Walcott, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 453. p.

23845. Platyceras texanum Walcott. Cotypes.
Upper Cambrian. Packsaddle Mountain, Burnett County,
Texas.

Walcott, Proc. U. S. Nat. Mus., XIII, 1890, p. 268, pl. 20, fig. 5.

- 13924. Platyceras thetiforme Walcott. Cotypes.
  Middle Devonian. Brush Peak, Eureka District, Nevada.
  Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 184, pl. 6, figs. 4-4b.
- 46534. Platyceras tribulosum White. Holotype.
  Burlington (Miss.). Burlington, Iowa.

  White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883,
  p. 168, pl. 41, figs. 6a, 6b.
- 13923. Platyceras undulatum Walcott. Holotype.
  Middle Devonian. Brush Peak, Eureka District, Nevada.
  Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 184, pl. 6, figs. 2, 2a.
- 45955. Platyceras? wisconsinense Ulrich and Scofield. Cotypes. Stones River (Ord.). Beloit, Wisconsin.

  Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1068, pl. 61, figs. 49-52.
- 158316. Platycenia jacksonensis Vaughan. Holotype. Jacksonian (Eocene). Jackson, Mississippi.

  Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 150, pl. 17, figs. 9-9c.
  - Platycrinites. See Platycrinus.
- 39888. Platycrinus ann-dixoni Troost. Chirotypes.
  Silurian. Decatur County, Tennessee.
  Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 61.
- 7806. Platycrinus haydeni Meek. Holotype.
  Lower Carboniferous. Old Baldy, near Virginia City,
  Montana.
  - Meek, Sixth Ann. Rept., U. S. Geol. Surv. Terr., 1873, p. 469, and footnote, as Platycrinites haydeni.—White, Twelfth Ann. Rept. U. S. Geol. Surv., Terr., Pt. I, 1883, p. 122, pl. 33, fig. 7a.
- 24185. Platycrinus hemisphericus Meek and Worthen. Plesiotype. Keokuk (Miss.). Crawfordsville, Indiana.

  Grabau, Amer. Journ. Sci. (4), XVI, 1903, p. 296, fig. 8, p. 297.
- 39886. Platycrinus huntsvillæ Troost. Chirotypes.

  Mississippian. Near Huntsville, Tennessee.

  Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 61.
- 7805. Platycrinus (Eucladocrinus) montanaensis Meek.

  Holotype.

  Lower Carboniferous. Twin Springs, Dry Creek Valle

  Montana.

  Mock With Aug. Boot M. S. Cool Surv. Toro, 1875 5, 275
  - Meek, Fifth Ann. Rept. U. S. Geol. Surv. Terr., 1872, p. 373. = Eucladocrinus montanaensis.

- 518 BULLETIN 53, UNITED STATES NATIONAL MUSEUM.
- 39887. Platycrinus polydactylus Troost. Chirotypes.
  Mississippian. Near Huntsville, Alabama.

  Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 62.
  - 8526. Platycrinus vexabilis White. Holotype.

    Lower Carboniferous. Mountain Spring, Old Mormon
    Road, Nevada.
    - White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 1874 p. 15; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. l. 1877, p. 81, pl. 5, fig. 2.
- 35396. Platycystites faberi Miller. Plastotype.
  Trenton (Ord.). Scott County, Virginia.
  Miller, N. Amer. Geol. and Pal., 1889, p. 272, fig. 398.
- 14407. Platyostoma inornatum Walcott. Holotype. Lower Carboniferous. Eureka District, Nevada.

  Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 255, pl. 24, figs. 3, 3a.
- 14984. Platyostoma (?) minutissimum Clarke. Cotypes.
  Naples (Dev.). Briggs Gully, Honeoye Lake, New York.
  Clarke, Bull. No. 16, U. S. Geol. Surv., 1885, p. 55.
- 34129. Platyostoma minutum Girty. Holotype.
  Three Forks (Dev.). Soda Butte Creek, Yellowstone
  National Park.
  - Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 506, pl 66, figs. 7a, 7b.
- 4802. Platyostoma ventricosa Conrad. Plastotype.
  Oriskany (Lower Dev.). Albany County, New York.
  Hall, Nat. Hist. N. Y., Pal. III, 1859, p. 469, pl. 113, figs. 7. 8.
- 13946. Platyschisma? ambiguum Walcott. Cotypes. Upper Devonian. The Gate, Eureka District, Nevada.

  Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 188, pl. 17, figs. 3, 3a.
  - 3626. Platyschisma depressum Dana. Cotypes. Carboniferous. Harpers Hill on the Hunter, New South Wales, Australia.
    - Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 707, Atlas, pl. 16-figs. 2a, 2b.
- 13947. Platyschisma mccoyi Walcott. Cotype
  Upper Devonian. Newark Mountain, Eureka District.
  Nevada.
  - Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 188, pl. 17, fgs. 1-1c.

3625. Platyschisma oculus Morris. Plesiotypes. Carboniferous. Harpers Hill on the Hunter, New South Wales, Australia.

> Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 707, Atlas, pl. 10, fig. I.

Platystoma minutum Girty. See Platyostoma minutum.

41167. Platystrophia acutilirata (Conrad). Plesiotypes. Richmond (Ord.). Waynesville, Ohio. Cummings, Amer. Journ. Sci. (4), XV, 1903, p. 48, fig. 25.

26887. Platystrophia biforata (Schlotheim). Plesiotype. Ordovician. Pulkowa, Russia. Cummings, Amer. Journ. Sci. (4), XV, 1903, p. 15, figs. 6a-6f.

34139. Platystrophia biforata (Schlotheim). Plesiotype. Clinton (Sil.). Gassport, New York. Cummings, Amer. Journ. Sci. (4), XV, 1903, p. 42, figs. 23a-23f.

34138. Platystrophia dentata (Pander). Plesiotype. Ordovician. Pulkowa, Russia. Cummings, Amer. Journ. Sci. (4), XV, 1903, p. 10, fig. 4 B.

35408. Platystrophia lynx (Von Buch). Plesiotype. Lorraine (Ord.). Cincinnati, Ohio.

Hayes and Ulrich, U. S. Geol. Surv., Folio 95, 1903, illustration sheet, figs. 21, 22.

158057. Platytrochus claibornensis de Gregorio. Plesiotypes. Claibornian (Eocene). Claiborne, Alabama. 158065. 158066. Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 77, pl. 5, figs. 10-12.

158040. Platytrochus goldfussi (Lea). Plesiotypes. Claibornian (Eocene). Claiborne, Alabama. Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 76, pl. 5, figs. 2-5, 7.

Platytrochus stokesi (Lea). 158012 Plesiotypes. Claibornian (Eocene). Claiborne, Alabama. to

158015. Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 74, pl. 4, figs. 20-24; pl. 5, fig. 8.

25596. Plecia pealei Scudder. Cotypes. Older Tertiary. Twin Creek, Wyoming. Scudder, Thirteenth Ann. Rept. U. S. Geol. Surv. Terrs., 1890, p. 585, pl. 4, figs. 10, 12.

46278. Plethocardia suberecta Ulrich. Holotype. Trenton (Ord.). Near Cannon Falls, Minnesota. Ulrich, Nineteenth Ann. Rept. Geol. and Nat. Hist. Surv. 1

1892, p. 245, fig. 29; Geol. and Nat. Hist. Surv. Minn., Rept., III, Pt. II, 1894, p. 577, pl. 40, figs. 25-27.

46279. Plethocardia umbonata Ulrich. Holotype.
Black River (Ord.). Six miles south of Cannon Falls,
Minnesota.

Ulrich, Nineteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn., 1892, p. 244, fig. 28; Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 576, pl. 40, figs. 22-24.

28137. Plethospira cassina Whitfield. Plesiotype. Beekmantown (Ord.). Fort Cassin, Vermont.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1009, fig. 7a.

45956. Plethospira semele (Hall). Utica (Ord.). Graf, Iowa. Plesiotype.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1010, pl. 70, fig. 8.

45957. Plethospira striata Ulrich. Holotype. Richmond (Ord.). Hanover, Butler County, Ohio.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II,

1897, p. 1011, pl. 70, fig. 7.

163460. Pleurodesma floridana Dall. Holotype.
Pliocene. Shell Creek, De Soto County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 57, fig. 30.

107689. Pleurodon woodii Dall.

Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 600, pl. 24, fig. 10.

115718. Pleurodonte bowdeniana Simpson. Cotypes. 115719. Miocene. Bowden, St. Thomas, Jamaica, West Indies.

Dall, Proc. U. S. Nat. Mus., XVII, 1894, p. 450, pl. 16, figs. 3-5.

12336. Pleuromya newtoni Whitfield. Cotypes.

Jurassic. Two miles south of Belle Fourche River, near

Bear Lodge Butte, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 367, pl. 5, figs. 19, 20.

28958 Pleuromya subcompressa (Meek). Plesiotypes. to Jurassic. Yellowstone National Park.

28961. Stanton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 626, pl. 74, figs. 8-11.

27140. Pleurophorella papillosa Girty. Holotype and paratype. Cisco (Upper Carb.). Graham, Young County, Texas.

Girty, Proc. U. S. Nat. Mus., XXVII, 1904, p. 729, pl. 45, figs. 4-6; pl. 46, fig. 5.

4184. Pleurophorus? calhouni (Meek & Hayden). Cotypes.
Permian. Near mouth of Smoky Hill River, Kansas.

Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 62, pl. 2, figs. 13a, 13b.

See Edmondia calhouni.

14388. Pleurophorus meeki Walcott.

Lower Carboniferous. Eureka District, Nevada.

Cotype.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 246, pl. 8, fig. 3.

6499. Pleurophorus oblongus Meek. Cotypes. Upper Carboniferous. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Nebraska (Hayden), 1872, p. 212, pl. 10, figs. 4a-c.

1017. Pleurophorus occidentalis Meek and Hayden. Holotype. Upper Carboniferous. Region of Nemaha, Nebraska.

Meek and Hayden, Trans. Albany Inst., IV, 1858, p. 80; Pal. Upper Mo., Smithsonian Cont. to Knowl. No. 172, XIV, 1864, p. 35, pl. 1, figs. 11a, 11b.

9454. Pleurophorus subcostatus Meek and Worthen. Plesiotypes.
Upper Carboniferous. Coyote Creek, New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., III, Suppl., 1881, p. 27, pl. 3, fig. 8.

35297. Pleurophorus subcostatus Meek and Worthen. Plesiotypes. Rico (Upper Carb.). Scotch Creek, Rico quadrangle, Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 444, pl. 9, figs. 11, 12.

4182. Pleurophorus ? subcuneatus Meek and Hayden. Cotypes.
Permian. Near mouth of Smoky Hill River, Kansas.

Meek and Hayden, Trans. Albany Inst., IV, 1858, p. 81 (as P. (Cardinia) subcuneata); Proc. Acad. Nat. Sci. Phila., for 1859, p. 29; Pal. Upper Mo., Smithsonian Cont. to Knowl. No. 172, XIV, 1864, p. 61, pl. 2, fig. 3.

35253. Pleurophorus taffi Girty.

Cotypes.

35254. Upper Coal Measures. Near Lehigh, and Atoka quadrangle, Indian Territory.

Girty, Nineteenth Ann. Rept. U. S. Geol. Surv., 1900, p. 584, pl. 72, figs. 2a-2c.

17897. Pleurorhynchus antiqua Owen.

Holotype.

Ordovician. Iowa?

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, pl. 2 B, fig. 19.

=Conocardium antiquum.

112083. Pleurotoma albida Perry.

Hol

Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890 pl. 4, fig. 8a.

61544. Pleurotoma barretti Guppy. Holotype.

Miocene. Cumana, Venezuela.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 290, pl. 17, fig. 6.

- Pliocene. Deadman Island, off San Pedro, California.

  Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 200, pl. 9, fig. 1.
- 136965. Pleurotoma boadicea Dall. Holotype.
  Oligocene. Oak Grove, Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, pl.
  41, fig. 4.
- 162534. Pleurotoma (Borsonia) dalli Arnold. Holotype. Pliocene. Deadman Island, off San Pedro, California.

  Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 201, pl. 6, fig. 2.
- 12458. Pleurotoma? hitzi (Meek). Holotype.
  Colorado (Cret.). Opposite Fort Shea, Missouri River.
  Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 161, pl. 34, fig. 4.
- Pliocene. Deadman Island, off San Pedro, California.

  Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 201, pl. 10, fig. 1.
- 115579. Pleurotoma jamaicense Guppy. Holotype.
  Miocene. Jamaica, British West Indies.
  Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 290, pl. 16, fig. 6.
- 130351. Pleurotoma lapenotierei Dall. Holotype. Oligocene. Ballast Point, Tampa, Florida. Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, pl. 43, fig. 14.
- 147038. Pleurotoma lerchi Vaughan. Holotype. Claibornian (Eocene). Hammets Branch, near Mount Lebanon, Louisiana.
  Vaughan, Bull. No. 142, U. S. Geol. Surv., 1897, p. 32, pl. 2, fig. 1.
- 147039. Pleurotoma ludoviciana Vaughan. Holotype. Claibornian (Eocene). Hammets Branch, near Mount Lebanon, Louisiana.
  Vaughan, Bull. No. 142, U. S. Geol. Surv., 1897, p. 33, pl. 2 fig. 3.
- 115584. Pleurotoma miranda Guppy. Holotype Miocene. Jamaica, West Indies.

Guppy, Proc. Sci. Assoc. Trinidad, 1882, p. 178, pl. 7, fig. 19.

1505. Pleurotoma pagoda Heilprin.

Holotype.

Eocene. Alabama.

Heilprin, Proc. U. S. Nat. Mus., III, 1880, p. 149, fig. 1.

- 162554. Pleurotoma (Leucosyrinx) pedroana Arnold. Holotype. Pleistocene. Deadman Island, off San Pedro, California.

  Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 202, pl. 9, fig. 4.
  - 8916. Pleurotoma platysoma Heilprin. Holotype. Eocene. Atacosa County, Texas.

    Heilprin, Proc. U. S. Nat. Mus., III, 1880, p. 150, pl. fig. 3.
- 111629. Pleurotoma (Drillia) pseudeburnea (Heilprin). Plesiotypes.
   Miocene. Shiloh, New Jersey.
   Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 114, pl. 21, figs. 8-12.
- 147041. Pleurotoma sancti-mauritii Vaughan. Cotypes. Claibornian (Eocene). St. Maurice, Louisiana.

  Vaughan, Bull. No. 142, U. S. Geol. Surv., 1897, p. 32, pl. 2, fig. 2.
- 162556. Pleurotoma (Spirotropis) smithi Arnold. Holotype. Pliocene. Deadman Island, off San Pedro, California.

  Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 216, pl. 6, fig. 13.
- 147042. Pleurotoma stantoni Vaughan. Holotype. Claibornian (Eocene). St. Maurice, Louisiana.

  Vaughan, Bull. No. 142, U. S. Geol. Surv., 1897, p. 34, pl. 2, fig. 5.
  - 1509. Pleurotoma venusta Heilprin. Holotype.
    Eocene. Jackson, Mississippi.
    Heilprin, Proc. U. S. Nat. Mus., III, 1880, p. 150, fig. 2.
    Pleurotomaria (sp. undet.) Owen=Liospira lenticulare.
- 15074. Pleurotomaria coronula Hall. Holotype.
  Upper Carboniferous. Weston, Missouri.

  Hall, Stansbury's Expl. and Surv. Valley Great Salt Lake, Utah,
  1852, p. 413, pl. 2, figs. 6a-6d.

  =Trepospira sphærulata.
- 24527. Pleurotomaria grayvillensis Norwood and Pratten.
  Plesiotypes.
  Upper Carboniferous. Wild Band Pockets, Arizona.
  White, Bull. No. 5, U. S. Geol. Surv. Terr., 1879, p. 219; Twelfth
  Ann. Rept. U. S. Geol. Surv. Terr., 1880, p. 140, pl. 34, fig. 5a.
- Octopes.

  Upper Carboniferous. Grasshopper Creek, Kansas.

  Meek and Hayden, Proc. Acad. Nat. Sci. Phila. for 1858, p. 264;
  Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 46, pl. 1, figs. 148, 14b.

6568. Pleurotomaria inornata Meek. Holotype.
Upper Carboniferous. Mortons Shaft, Nebraska City,
Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Nebr. (Hayden), 1872, p. 232, pl. 4, fig. 14.

34126. Pleurotomaria isaacsi Hall and Whitfield (?) Plesiotype.

Three Forks (Dev.). Wall Canyon, Clark Fork Valley,

Yellowstone National Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 505, pl. 66, figs. 5a, 5b.

17331. Pleurotomaria lonensis Walcott. Cotype.
Upper Pogonip (Ord.). Lone Mountain, near Eureka,
Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 80, pl. 11, fig. 22.

19506. Pleurotomaria marrotiana D'Orbigny. Holotype. Turonien (Cret.). Riberac, Dordogne, France.

D'Orbigny, Paleont. Francaise, Terr. Cret., II, 1842-43, p. 267, pl. 202, figs. 5, 6.

3628. Pleurotomaria morrisiana McCoy. Plesiotypes. Carboniferous. Harpers Hill on the Hunter, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 706, Atlas, pl. 9, figs. 15, 15a, 16.

17900. Pleurotomaria muralis Owen. Holotype.
Ordovician. Lower Fort Garry, Red River of the North,
Manitoba, Canada.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, p. 581, pl. 2, fig. 6.

14413. Pleurotomaria nevadensis Walcott. Cotype.
Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 259, pl. 24, figs.

14414. Pleurotomaria nodomarginata McChesney. Plesiotype.

Lower Carboniferous. Eureka District, Nevada.

2, 2a.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 259, pl. 18, fig. 15.

3661. Pleurotomaria nuda Dana. Holotype. Carboniferous. Harpers Hill on the Hunter, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 706, Atlas, pl. 9, figs. 17a-c.

6598. Pleurotomaria perhumerosa Meek. Cotypes.
 7025. Upper Carboniferous. Mortons Shaft, Nebraska City. Nebraska, and Rulo, Kansas.

Meek, Final Rept. U. S. Geol. Surv. Nebr. (Hayden), 1872, p. 252. pl. 4, figs. 13a-13b.

8926. Pleurotomaria perizomata White. Cotypes. Upper Carboniferous. Near Taos, New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., III, Suppl., 1881, p. 31, pl. 3, figs. 5a-5c.

30239. Pleurotomaria stantoni Shattuck. Holotype. Buda (Lower Cret.). Near Austin, Texas,

Snattuck, Bull. No. 205, U. S. Geol. Surv., 1903, p. 30, pl. 20, figs.

1003. Pleurotomaria subturbinata Meek and Hayden. Holotype. Upper Carboniferous. Near Helena, Kansas.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila. for 1858, p. 264; Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 47, pl. 1, fig. 13.

7753. Pleurotomaria taggerti Meek. Holotype. Upper Carboniferous. Horseshoe Mountain, South Park, Colorado.

Meek, Seventh Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 231, in a footnote.—White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 140, pl. 34, figs. 1a, 1b.

=Euconospira taggarti.

97353. Pleurotomella chariessa pistillata Dall. Holotype.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 41, pl. 3, fig. 3.

20261. Plicatula arenaria Meek.

Cotype.

Colorado (Cret.). Covero, New Mexico.

Meek, Rept. Expl. Exped. Santa Fé to junction of Grand and Green Riv., Macomb, 1876, p. 126, pl. 1, figs. 5a-c.—Stanton, Bull. 106, U. S. Geol. Surv., 1893, p. 70, pl. 9, figs. 3, 4.

111619. Plicatula densata Conrad.

Plesiotype.

Miocene. Shiloh, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 35, pl. 5, figs. 3-8.

139082. Plicatula filamentosa concentrica Dall. Cotypes. Eocene. Wahtubbee Hills, Clarke County, Mississippi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 762.

8048. Plicatula hydrotheca White. Cotypes.
Colorado (Cret.). Head of Waterpocket Canyon, southern Utah.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879, p. 279,
pl. 6, figs. 3a, 3b.—Stanton, Bull. No. 106, U. S. Geol. Surv.,
1893, p. 69, pl. 9, figs. 1, 2.

9863. Plicatula incongrua Conrad. Cotypes.
Washita (Lower Cret.). Between El Paso and Frontera,
Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857. p. 153, pl. 6, figs. 10a, 10b.

157838. Plicatula ostreiformis Stanton. Cotypes.
Lower Tejon (Eocene). One mile southeast of Lower
Lake, Lake County, California.

Stanton, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. I, 1897, p. 1038, pl. 63, figs. 5, 6.

115536. Plicatula vexillata Guppy. Holotype. Oligocene. Jamaica, British West Indies.

Guppy, Geol. Mag., London, Dec. II, I, 1874, p. 436, pl. 17, fig. 7.

115732. Pododesmus scopelus Dall. Holotype.
Oligocene. Rock Bluff, Chattahoochee River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 779, pl. 30, fig. 8.

37971. Poliochera punctulata Scudder.

Upper Coal Measures. Braidwood, Illinois.

Holotype.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, p. 444, pl. 39, figs. 2, 6; Foss. Insects N. America, 1890, p. 420, pl. 31, figs. 2, 6.

25590. Poliomyia recta Scudder. Holotype.
Older Tertiary. Green River, Wyoming.
Scudder, Thirteenth Ann. Rept. U. S. Geol. Surv. Terr., 1890.

38144. Polyernus complanatus Scudder. Holotype.
Upper Coal Measures. Mazon Creek, Grundy County.
Illinois.

p. 556, pl. 9, figs. 19, 21.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1885, p. 343, pl. 32, figs. 8, 11; Foss. Insects N. America, I, 1890, p. 307, pl. 18, figs. 8, 11.

38155. Polyernus laminarum Scudder. Cotypes
Upper Coal Measures. Campbells Ledge, near Pittston.
Pennsylvania.

Scudder, Mem. Boston Soc. Nat. Hist., III, 1885, p. 343, pl. 31. fig. 1; Foss. Insects N. America, I, 1890, p. 307, pl. 17, fig. 1.

25525. Polygraphus wortheni Scudder. Holotype.
Older Tertiary. Roan Mountains, western Colorado.
Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 158, pl. 12, fig. 13.

Oligocene. Near Baileys Ferry, Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 377-pl. 22, fig. 33.

- 114420. Polynices (Lunatia) internus (Say). Plesiotypes.
  Miocene. Natural Well, Duplin County, North Carolina.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 372, pl. 20, fig. 7.
- 44075. Polypora approximata Ulrich. Cotypes. 44076. Chester (Miss.). Litchfield and Sloans Valley, Kentucky. Ulrich, Geol. Surv. Ill., VIII, 1890, p. 599, pl. 61, figs. 5-5a.
- 43792. Polypora cestriensis Ulrich. Cotype and figured sections. Chester (Miss.). Sloans Valley, Kentucky.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 594, pl. 55, figs. 4-4b; pl. 60, figs. 7b, 7c.
- 43791. Polypora complanata Ulrich. Figured sections of cotypes. Chester (Miss.). Chester, Illinois.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 597, pl. 60, figs. 6b, 6c.
- 43446. Polypora distincta Ulrich. Holotype. Upper Coal Measures. Springfield, Illinois. Ulrich, Geol. Surv. Ill., VIII, 1890, p. 603, pl. 61, figs. 7-7a.
- 43789. Polypora? gracilis Ulrich. Plesiotype. Keokuk (Miss.). Kings Mountain, Kentucky.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 590, pl. 61, fig. 10a.
- 44073. Polypora halliana Prout. Plesiotype and figured sections. Keokuk (Miss.). Keokuk, Iowa.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 587, pl. 59, figs. 5b, 5c.
- 43485. Polypora impressa Ulrich. Holotype. Waverly (Miss.). Richfield, Ohio.

  Ulrich, Bull. Denison Univ., IV, 1888, p. 72, pl. 13, figs. 8, 8a.
- 44074. Polypora incepta Hall? Figured section of plesiotype. Waldron (Sil.). Waldron, Indiana.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 358, pl. 55, fig. 1.
- 44077. Polypora maccoyana Ulrich. Cotypes. Keokuk (Miss.). Nauvoo, Illinois.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 588, pl. 59, figs. 3-3d.
- 43445. Polypora radialis Ulrich. Cotypes. Keokuk (Miss.). Keokuk, Iowa.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 591, pl. 60, figs. 1-1d.
- 43447. Polypora retrorsa Ulrich. Cotype. Keokuk (Miss.). Keokuk, Iowa.
  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 591, pl. 59, figs. 6-6d.
- 43444. Polypora shumardi Prout. Plesiotype and figured sections. Hamilton (Dev.). Utica, Indiana.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 586, pl. 55, figs. 2-2d.

44078. Polypora simulatrix Ulrich. Cotypes. Keokuk (Miss.). Keokuk, Iowa (Nauvoo, Illinois, in error).

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 589, pl. 59, figs. 4-4b.

- 43790. Polypora spinuliferà Ulrich, var. Cotype. Chester (Miss.). Near Red Oak, Iowa.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 598, pl. 61, figs. 4-4a.
- 6523. Polypora submarginata Meek. Cotypes. Upper Carboniferous. Nebraska City, Nebraska.

  Meek, Final Rept. U. S. Geol. Surv. Nebr. (Hayden), 1872, p. 154, pl. 7, figs. 7a, 7b.
- 43448. Polypora whitei insculpta Ulrich. Holotype. Upper Coal Measures. Springfield, Illinois. Ulrich, Geol. Surv. Ill., VIII, 1890, p. 600, pl. 62, fig. 1.
- 41813. Pontocypris (?) acuminata Ulrich. Holotype. Waverly (Miss.). Moots Run, near Granville, Ohio.

  Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 210, pl. 17, figs. 8a-c.
- 41333. Pontocypris (?) illinoisensis Ulrich. Holotype.
  Richmond (Ord.). Savannah, Illinois.

  Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 107, pl.
  10, figs. 16a-c.
- 27202. Popanoceras ganti Smith.

  Upper Coal Measures. Graham, Young County, Texas.

  Smith, Mon. XLII, 1903, p. 132, pl. 21, figs. 14-16.
- Permian. Military Crossing of the Big Wichita, Baylor County, Texas.
  - White, Amer. Nat., XXIII, 1889, p. 117, pl. 1, figs. 9-11; Bull. No. 77, U. S. Geol. Surv., 1891, p. 21, pl. 1, figs. 9-11.—Smith. Mon. XLII, U. S. Geol. Surv., 1903, p. 134, pl. 22, figs. 9-11.
- Pogonip (Ord.). Pogonip Mountain, White Pine District.
  Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II. 1877, p. 234, pl. 1, fig. 16.

[Is not a Porambonites. May be a Parastrophia or a rhynchonelloid.]

- 11409. Porites ramosa (Lonsdale). Plesiotype.
  Upper Oligocene. Jacksonboro, Georgia.
  - Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 195, pl. 29 figs. 5, 6.
- 38204. Poroblattina complexinervis Scudder.

  Lower Permian. Cassville, West Virginia.

  Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 139, pl. 13, pl. 14.

38203. Poroblattina fossa Scudder.

Cotypes.

Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 137, pl. 11, fig. 15.

38106. Poroblattina gratiosa Scudder.

Holotype.

Lower Permian. Cassville, West Virginia.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 136, pl. 11, fig. 13.

28145. Porocrinus shawi Schuchert.

Holotype.

Trenton (Ord.). Head of Frobisher Bay, Baffin Land.

Schuchert, Proc. U. S. Nat. Mus., XXII, 1900, p. 155, pl. 12, figs. 1-3.

135690. Poromya jamaicensis Dall.

Holotype.

Bowden (Oligocene). Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci., Phila., III, Pt. VI, 1903, p. 1509, pl.,56, fig. 23.

33901. Posidonia? clathrata Lea.

Holotype.

Upper Coal Measures. Near Wilkesbarre, Pennsylvania.

Lea, Journ. Acad. Nat. Sci., Phila. (2), II, 1852, p. 205, pl. 20, fig. 1b.
[Either Lima or Aviculopecten.]

33903. Posidonia? distans Lea.

Holotype.

Upper Coal Measures. Near Wilkesbarre, Pennsylvania.

Lea, Journ. Acad. Nat. Sci. Phila. (2), II, 1852, p. 205, pl. 20, fig 3b.

[A fragment apparently of a pleurotomaroid gastropod.]

33902. Posidonia? perstriata Lea.

Holotype.

Upper Coal Measures. Near Wilkesbarre, Pennsylvania.

I.ea, Journ. Acad. Nat. Sci. Phila. (2), II, 1852, p. 205, pl. 20, fig. 3a.

=Edmondia perstriata.

13918. Posidonomya devonica Walcott.

Cotypes.

Middle Devonian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 179, pl. 4, fig. 7.

14181. Posidonomya? fragosa Meek.

Cotypes.

Lower Carboniferous. White Pine Mountains, near Hamilton, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 92, pl. 3, figs. 8, 8a; p. 249, pl. 3, figs. 9-11.

=Lunulicardium fragosum.

13919. Posidonomya lævis Walcott.

Cotypes.

Middle Devonian Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 178, pl. 4, fig. 6.

112534. Potamides (Pyrazisinus) acutus Dall. Holotype Oligocene. Hillsboro River, above Tampa, Florida.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892. p. 289, pl. 22, fig. 19.

112533. Potamides (Pyrazisinus) cornutus Heilprin. Oligocene. Tampa, Florida.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892.; 288, pl. 15, fig. 3.

113370. Potamides hillsboroënsis Heilprin. Plesiotype. Oligocene. Tampa, Florida.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892 p. 286, pl. 15, fig. 12.

113377. Potamides (Pyrazisinus) scalatus (Heilprin). Plesiotype. Pliocene. Caloosahatchie River, near Fort Thompson. Florida.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 289, pl. 15, figs. 1, 7, 8, 10b.

See Cerithidea scalata.

113375. Potamides (Pyrazisinus) scalatus ecarinatus Dall.

Holotype.

Pliocene. Caloosahatchie River, near Fort Thompson. Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892.; 289, pl. 15, fig. 4.

112525. Potamides (Lampanella) transecta Dall. Holotype. Oligocene. Ballast Point, Tampa, Florida.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 180 pl. 11, fig. 7; Pt. II, 1892, p. 287.

13393. Potamis pullatus Gould.

Holotype.

Post Tertiary. San Diego, California.

Gould, Rept. Expl. and Surv. R. R. Miss. to Pacific Ocean, V 1856, p. 333, pl. 11, fig. 23.

Poteriocrinites. See Poteriocrinus.

8066. Poteriocrinus montanaensis Meek. Holotyre Lower Carboniferous. Old Baldy, near Virginia City

Montana.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 469 at footnote as Poteriocrinites montanensis.—White, Twelfit Ann. Rept. U. S. Geol, Surv. Terr., Pt. I, 1883, p. 128, pl. 3

= Poteriocrinus (Scaphiocrinus) montanaensis.

39937. Poteriocrinus municipalis Troost. Chirotype

Mississippian. Lawrence County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 61.

43592. Prasopora conoidea Ulrich. Cotypes and figured sections. Black River (Ord.). Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 249, pl. 16, figs. 11-15.

43590. **Prasopora contigua** Ulrich. Figured section of holotype. Black River (Ord.). Goodhue County, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 249, pl. 16, figs. 24-26.

43588. **Prasopora insularis** Ulrich. Cotypes and figured sections. Trenton (Ord.). Near Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 251, pl. 16, figs. 18-23.

43589. Prasopora insularis fillmorensis Ulrich. Figured sections of holotype.

Black River (Ord.). Fountain, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 252, pl. 16, figs. 18-20.

43587. Prasopora lenticularis Ulrich. Holotype and figured sections.

Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 253, pl. 17, figs. 22-25.

43691. **Prasopora nodosa** Ulrich. Cotypes and figured sections. Trenton (Ord.). Nashville, Tennessee.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 245, pl. 11, figs. 1-1b.

43586. **Prasopora oculata** Foord. Plesiotypes and figured sections. Trenton (Ord.). Near Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 252, figs. 15, c, d, p. 248.

43175. Prasopora patera Ulrich and Bassler. Cotypes and figured sections.

Trenton (Ord.). Four miles north of Columbia, Tennessee.

Ulrich and Bassler in Hayes and Ulrich, U. S. Geol. Surv., Folio 95, 1903, illustration sheet, figs. 44-46; Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 20, pl. 6, figs. 11-14.

45052. **Prasopora selwyni** Nicholson. Figured section of plesiotypes. 45053. Trenton (Ord.). Near Cannon Falls, Minnesota, and

Ottawa, Canada.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 248, figs. 15a-b; p. 250, pl. 16, figs. 16-17.

43593. **Prasopora simulatrix** Ulrich. Cotypes and figured sections. 43594. Trenton (Ord.). Burgin, Kentucky.

Trenton (Ord.). Burgin, Kentucky. Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 245, pl. 16, figs. 3, 5, 8, 10.

44054. Prasopora simulatrix orientalis Ulrich. Cotypes and figured sections.

Trenton (Ord.). Trenton Falls. New York, and Ottawa.

Trenton (Ord.). Trenton Falls, New York, and Ottawa. Canada.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. l, 1893, p. 246, pl. 16, figs, 1, 2, 6, 7.

115411. Prenaster loveni Cotteau.

Holotype.

Eocene. St. Bartholomew, West Indies.

Cotteau, Kongl. Svenska Vet.-Akad. Hand., XIII, 6, 1874, p. 34 pl. 6, figs. 11-15.

38853. Prestwichia danæ Meek and Worthen. Plesiotypes. 38854. Upper Coal Measures. Mazon Creek, Grundy County, Illinois.

Packard, Mem. National Acad. Sci., III, 1886, p. 146, pl. 6, figs. 1, 1a, 2, 2a.

See Belinurus lacoei.

38857. Prestwichia longispina (Packard). Cotypes.
38858. Upper Carboniferous. Butler Mine, Pittston, Pennsylvania.

Packard, Amer. Nat., XIX, 1885, p. 292 (as Euproops longispina); Mem. Nat. Acad. Sci., III, 1886, p. 147, pl. 5, fig. 4: pl. 6, fig. 3.

35374. Prestwichia signata Beecher. Plastotype.
Lower Permian. Three miles west of Stockdale, Kansas.

Beecher, Amer. Journ. Sci. (4), XVIII, 1904, p. 23, text fig. 1;
p. 24.

41339. Primitia celata Ulrich.

Black River (Ord.). Minneapolis, Minnesota.

Holotype.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II. 1894, p. 653, pl. 43, figs. 67, 68.

41337. Primitia centralis Ulrich. Holotype and paratype.

Trenton (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 130, pl. 10, figs. 1, 2a-2c.

41422. Primitia cestriensis Ulrich. Holotype. Chester (Miss.). Chester, Illinois.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 201.

41419. Primitia cestriensis caldwellensis Ulrich. Holotype. Chester (Miss.). Claxton P. O., Caldwell County, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 202, pl. 14, figs. 7a-c.

41346. Primitia cincinnatiensis (Miller). Plesiotypes.

Lorraine (Ord.). Clarksville, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 132, pl 10, figs. 5a, b, 6a-c.

41348. Primitia duplicata Ulrich. Holotype. Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 654, pl. 43, figs. 60, 61.

41341. Primitia gibbera Ulrich. Holotype. Utica (Ord.). Near Spring Valley, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 655, pl. 43, figs. 57-59.

41827. Primitia glabra Ulrich. Holotype. Richmond (Ord.). Blanchester, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 134, pl. 10, figs. 9a-c.

41427. Primitia granimarginata Ulrich. Cotypes. Chester (Miss.). Near Grayson Springs Station, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 201, pl. 12, figs. 8a, b.

41332. Primitia impressa Ulrich.

Cotypes.

Richmond (Ord.). Savannah, Illinois.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 131, pl. 10, figs. 3a-3c, 4a-4c.

41349. Primitia mammata Ulrich. Holotype. Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 652, pl. 43, figs. 78-81.

41347. Primitia medialis Ulrich. Holotype. Richmond (Ord.). Jefferson County, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 132, pl. 10, figs. 7a, b.

41336. Primitia micula Ulrich. Cotypes. Trenton (Ord.). Near Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 653, pl. 43, figs. 69-72.

41340. Primitia milleri Ulrich. Holotype. Richmond (Ord.). Weisburg, Indiana.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 133, pl. 12, figs. 2a-2c.

41838. Primitia minutissima Ulrich. Holotype. Stones River (Ord.). Fountain, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 651, pl. 45, fig. 31.

41334. Primitia nitida Ulrich. Holotype.

Trenton (Ord.). Near Paris, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 135, pl. 8, fig. 7.

41552. Primitia nodosa Ulrich. Cotypes.

Utica and Lorraine (Ord.). Cincinnati, Ohio. 41553.

> Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 134, pl. 10, figs. 11a, b, 12a, b.

=Ulrichia nodosa.

41436. Primitia perminima Ulrich. Holotype. Trenton (Ord.). Mouth of Licking River, Covington, Kentucky.

> Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 131, pl. 7, fig. 7.

41345. Primitia rudis Ulrich.

Holotype.

Utica (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 136, pl. 10, figs. 8a-8c.

41343. Primitia sancti pauli Ulrich.

Holotype.

Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II. 1894, p. 652, pl. 43, figs. 73, 74.

41362. Primitia (?) sculptilis Ulrich.

Holotype.

Trenton (Ord.). Perryville, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 136, pl. 8, fig. 6.

= Halliella sculptilis.

41425. Primitia simulans Ulrich.

Holotype.

Chester (Miss.). Chester, Illinois.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 201.

41426. Primitia subæguata Ulrich. Holotype. Chester (Miss.). Claxton P. O., Caldwell County, Ken-

tucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 202, pl. 14, figs. 8a-c.

41342. Primitia tumidula Ulrich.

Cotypes.

Utica (Ord.). Near Spring Valley, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II. 1894, p. 655, pl. 43, figs. 62-65.

41344. Primitia uphami Ulrich.

Holotype.

Trenton (Ord.). Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II. 1894, p. 651, pl. 43, fig. 66.

41462. Primitiella constricta Ulrich.

Cotypes. Stones River (Ord.). High Bridge, Kentucky; Minne-41463. apolis, Minnesota.

> Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II. 1894, p. 647, pl. 43, figs. 48-52.

41476. Primitiella fillmorensis Ulrich. Holotype. Black River (Ord.). Fountain, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 649, pl. 45, figs. 28-30.

41350. Primitiella limbata Ulrich.

Cotypes.

Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 648, pl. 43, figs. 53-56.

41475. Primitiella simulans Ulrich.

Cotypes.

Black River (Ord.). Near Fountain, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 648, pl. 43, figs. 26-28.

41467. Primitiella unicornis (Ulrich). Plesiotypes. Utica (Ord.). One mile west of Covington, Kentucky.

> Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 649, pl. 43, figs. 75-77.

See Leperditia unicornis.

20259. Prionocyclus? macombi Meek.

Cotype.

Colorado (Cret.). Banks of Canadian, New Mexico.

Meek, Rept. Expl Exped. Santa Fé to junction of Grand and Green Riv., Macomb, 1876, p. 132, pl. 2, figs. 3a-d.

20259. Prionocyclus macombi Meek. Cotype and plesiotypes. Colorado (Cret.). Banks of Canadian, New Mexico, and 22940. near Mancos, Colorado.

> Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 172, pl. 47, figs. 1-5.

223. Prionocyclus woolgari (Mantell). Plesiotypes. Fort Benton (Cret.). Southeast base of Black Hills, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 455, pl. 7, figs.

= Prionotropis woolgari.

12283. Prionocyclus wyomingensis Meek. Plesiotypes.

Fort Benton (Cret.). East Fork of Beaver Creek, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 440, pl. 14, figs. 1-3.

7729. Prionocyclus wyomingensis Meek. Cotype.

Colorado (Cret.). Medicine Bow River, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 35, pl. 15, figs. 1a-e.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 171, pl. 40, figs. 1-4.

See Ammonites serratocarinatus.

22941. Prionotropis hyatti Stanton. Cotypes Colorado (Cret.). Huerfano Park, Colorado.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 176, pl. 4, figs. 5-8.

8629. Prionotropis? lævianus (White). Holotype.
Colorado (Cret.). Ojo de los Cuervos, New Mexico.
Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 178, pl. 45.
figs. 3, 4.

See Ammonites lœvianus.

Plesiotypes.
Colorado (Cret.). Missouri River, five miles below mouth
of Vermillion River, South Dakota.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 174, pl. 4, figs. 1-4.

See Prionocyclus woolgari.

3681. Prismodictya telum (Hall). Cotypes. Chemung (Dev.). Cattaraugus County, New York.

Hall, Thirty-fifth Ann. Rept. N. Y. State Mus. Nat. Hist., 1884. p. 470.—Hall and Clarke, Mem. II, State Mus. N. Y., 1898 (Oct., 1899), p. 80, pl. 17, figs. 6, 8.

- 43443. Prismopora minima Ulrich. Cotypes and figured sections. Coal Measures (Upper Carb.). Sparta, Illinois.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 506, p. 78, figs. 1-1c.
- 43692. Prismopora serrulata Ulrich. Cotype and figured sections. Chester (Miss.). Sloans Valley, Kentucky.

  Ulrich, Journ. Cincinnati Soc. Nat. Hist., VII, 1884, p. 41, pl. 2. figs. 2-2f.
- 8065. Prismopora triangulata (White). Cotypes. Upper Carboniferous. Yampa Plateau, Colorado.

  Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 340, pl. 1, fig. 15.

  See Ptilodictya triangulata.
- 43782. Prismopora trifolia Rominger. Plesiotypes. Keokuk (Miss.). Keokuk, Iowa.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 505, pl. 77, fig. 4b.

  = Phractopora trifolia.
- 43264. Proboscina frondosa (Nicholson). Plesiotype.
  Lorraine (Ord.). Cincinnati, Ohio.

  Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. L.
  1893, p. 119, pl. 1, fig. 28.
- 43265. Proboscina tumulosa Ulrich.

  Black River (Ord.). St. Paul, Minnesota.

  Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, P. I.
  1893, p. 119, pl. 1, fig. 24.

TYPE SPECIMENS OF INVERTEBRATE FOSSILS. 25551. Procas vinculatus Scudder. Cotype. Older Tertiary. Roan Mountains, western Colorado, and White River, eastern Utalı. Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 102, pl. 11, fig. 3. Productella. See also Productus (Productella). 35171. Productella alifera Girty. Cotypes. Madison (Miss.). South side of Soda Butte Creek, Yellowstone National Park. Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 530, pl. 68, figs. 10a, 10b, 10c. 35170. Productella cooperensis Swallow. Plesiotypes. Madison (Miss.). Crowfoot Ridge, Gallatin Range, Yellowstone National Park. Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 528, pl. 68, figs. 8a, 8b, 8c, 9a, 9b. 13814. Productella hallana Walcott. Plesiotypes. Base of Upper Devonian. Near Fort Resolution, Great Slave Lake, Canada. Meek, Trans. Chicago Acad. Sci., I, 1868, p. 91, pl. 13, figs. 4a-d (as Productus ——?). See Productus (Productella) hallanus and P. dissimilis? 11446. Productella semiglobosa Nettelroth. Plesiotype. Ouray (Upper Dev.). Seven localities in central Colorado. 33929. 3 1. Girty, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 42, pl. 3, figs. 7-10. Productus ———? Meek=Productella hallana.
Productus ———? Meek=Productus(Productella)lachrymosa stigmata. Productus (sp. indet.) Hall=Productus cora. 15058. **Productus cora** d'Orbigny. Plesiotypes. Upper Carboniferous. Weston, Missouri. Hall, Stansbury's Expl. and Surv. Valley Great Salt Lake, Utah, 1852, p. 411, pl. 3, fig. 4 (as Productus sp. indet.). Productus cora d'Orbigny. Plesiotypes. 35349 Upper Carboniferous. Scotch Creek and Sandstone Mounto tain, Rico quadrangle; Bear Creek and Big Percent 35**352.** Creek, Durango quadrangle, Colorado.

8482. Productus costatus Sowerby? Plesiotypes. Upper Carboniferous. Madison County, Iowa. 9179. White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 109, pl. 8, figs. 2a-2d.

figs. 1, 2, 3, 4.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 364, pl. 4,

24534. Productus costatus Sowerby? Plesiotypes
Upper Carboniferous. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Nebr. (Hayden), 1872, p

159, pl. 6, figs. 6a, 6b.

15143. Productus costatus Sowerby? var. Plesiotypes
Upper Carboniferous. White Pine District, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 6, pl. 7, figs. 4-4b.

13824. Productus dissimilis Hall? Plesiotypes
Base of Upper Devonian. Clear Water River, Mackenzie
River Basin, Canada.

Meek, Trans. Chicago Acad. Sci., I, 1868, p. 91, pl. 13, figs. 32-c = Productella hallana.

14216. Productus elegans Norwood and Pratten. Plesiotype
Lower Carboniferous. North of Snowstorm Hill, Dr.
Canyon, Oquirrh Mountains, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV. P. II, 1877, p. 268, pl. 5, figs. 3, 4.

[Does not appear to be like the specimens from the Kaskaski d the Mississippi Valley.]

14217. Productus flemingi burlingtonensis Hall. Plesiotype
Lower Carboniferous. North of Snowstorm Hill. In
Canyon, Oquirrh Mountains, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV. ?. II, 1877, p. 265, pl. 5, figs. 9-12.

= Productus burlingtonensis.

3633. Productus fragilis Dana. Cotype Carboniferous. Wollongong Point, Illawarra, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 686; Atlas, 7, 183, 7-7d.

35168. Productus gallatinensis Girty.

Cotype
35169. Madison (Miss.). Crowfoot Ridge, Gallatin Range, ardivide between Gallatin River and Panther Create Yellowstone National Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 533 f-68, figs. 11a, 11b, 11c, 11d, 7a, 7b, 7c.

to Hermosa (Upper Carb.). Near Cascade Creek, Engine Mountain quadrangle; Bear Creek, Durango quarangle, and San Juan Region, Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 361, plifigs. 4, 5, 6, 7, 8.

8040. Productus giganteus (Martin). Plesiotype
Lower Carboniferous. McCloud River, Shasta Count
California.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I. IN: p. 132, pl. 36, figs. 1a-1c.

13816. Productus (Productella) hallanus Walcott. Cotypes. Upper Devonian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 130, pl. 13, figs. 17, 17a.

= Productella hallana.

See Productus dissimilis?

14191. Productus hirsutiforme Walcott. Cotype.
White Pine (Lower Carb.). Applegate Canyon, White
Pine District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 133, pl. 2, figs. 10,

35345. Productus inflatus McChesney. Plesiotypes. Hermosa? (Upper Carb.). Horseshoe Mountain, Leadville District, Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 359, pl. 3, figs. 1, 2, 3.

13813. Productus (Productella) lachrymosus limus (Conrad).
Plesiotype.

Upper Devonian. The Gate, near Eureka, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 132, pl. 13, figs. 18, 18a.

= Productella lachrymosa lima.

13814. Productus (Productella) lachrymosa stigmata Hall.

Plesiotypes.

Base of Upper Devonian. Lockhart River, Mackenzie River Basin, Canada.

Meek, Trans. Chicago Acad. Sci., I, 1868, p. 92, pl. 13, figs. 5a, 5b (as Productus ——?).

35183. Productus lævicosta White. Plesiotypes.
Madison (Miss.). Crowfoot Ridge, Gallatin Range, Yellowstone National Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 534, pl. 69, figs. 9b, 9c.

14214. Productus lævicostus White? Plesiotype.

Lower Carboniferous. North of Snowstorm Hill, Dry Canyon, Oquirrh Mountains, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 266, pl. 5; figs. 7, 8.—Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 534, pl. 69, fig. 9a.

6649. **Productus longispinus Sowerby**. Plesiotypes. Upper Carboniferous. Bellevue, Nebraska.

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Meek, Final Rept. U. S. Geol. Surv. Nebr. (Hayden), 1872, p. 161, pl. 6, fig. 7.

8496. **Productus longispinus** Sowerby. Plesiotypes. 8497. Upper Carboniferous. Santa Fé, New Mexico, and Madison County, Iowa.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 118, pl. 8, figs. 5a-5d.

- 15138. **Productus longispinus** Sowerby. Plesiotypes. Upper Carboniferous. Fossil Hill, White Pine District, Nevada.
  - Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 78, pl. 8, figs. 4, 4a.
- 25623. Productus longispinus alaskensis Schuchert. Cotypes.
   26003. Lower Carboniferous. Kuiu Island, Southern Alaska.
  - Schuchert, Seventeenth Ann. Rept. U. S. Geol. Surv., 1897, p. 903.
- 15136. Productus longus Meek. Cotypes. Upper Carboniferous. Fossil Hill, White Pine Mountains, Nevada.
  - Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I. 1877, p. 67, pl. 7, figs. 6-6b (named P. longus at end of description).
- 8494. Productus mexicanus Shumard? Plesiotype.
  Upper Carboniferous. Camp Cottonwood, Old Mormon
  Road, Nevada.
  - White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 120, pl. 8, figs. 6a-6c.
- 646. Productus multistriatus Meek. Cotypes.
  Upper Carboniferous. Long Valley, near Eureka, Nevada.

  Meek, Proc. Acad. Nat. Sci. Phila., 1860, p. 309; Rept. Expl.
  Great Basin of Utah, Simpson, 1876, p. 350, pl. 1, figs. 8-8b.
- 15131. Productus multistriatus Meek. Plesiotypes.
   15133. Upper Carboniferous. Ruby Valley Range, and White Pine District, Nevada.
  - Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 76, pl. 8, figs. 3-3e.
- 8491. Productus muricatus Norwood and Pratten. Plesiotype.
  Upper Carboniferous. Rock Creek, Lake County, Colorado.
  - White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 120, pl. 8, figs. 4a-4c.
- 13819. Productus (Productella) navicella (Hall). Plesiotype.
  Middle Devonian. Atrypa Peak, Eureka District, Nevada.
  Walcott, Mon. VIII, U. S. Geol. Surv. 1884, p. 131, pl. 13, fig. 9.
  = Productella navicella.
- 8469. Productus nebrascensis Owen. Plesiotypes.
  Upper Carboniferous. Near Santa Fé, New Mexico.

  White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 116, pl. 8, figs. 3c, 3d.
- 6995. Productus nebrascensis Owen. Plesiotype. 24535. Upper Carboniferous. Bellevue, and Pawnee County, Nebraska.
  - Meek, Final Rept. U. S. Geol. Surv. Nebr. (Hayden) 1872, p. 165, pl. 2, fig. 2; pl. 5, figs. 11a-d.

8470. Productus nebrascensis Owen. Plesiotype.
Upper Carboniferous. Madison County, Iowa.

White, Thirteenth Ann. Rept. Geol. Surv. Ind. 1884, p. 122, pl. 24, figs. 7-9.

35357. **Productus nebraskensis** Owen. Plesiotypes. Hermosa (Upper Carb.). Hermosa Creek, Durango quadrangle, Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv. 1903, p. 370, pl. v, figs. 1, 2, 2a.

668. Productus nevadensis Meek. Cotypes.

Upper Carboniferous. West side of Buell Valley, east of Eureka, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 64, pl. 8, figs. 2-2e.

35166. Productus parviformis Girty. Cotypes.
35167. Madison (Miss.). Crowfoot Ridge, Gallatin Range, and
Forellen Peak, Teton Range, Yellowstone National
Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 536, pl. 68, figs. 6a-6d.

8538. **Productus parvus** Meek and Worthen. Plesiotypes. Lower Carboniferous. Mountain Spring, Old Mormon Road, Nevada.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 83, pl. 5, figs. 6a, 6b.

6515. Productus pertenuis Meek. Cotypes. 6984. Upper Carboniferous. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Nebr. (Hayden), 1872, p. 164, pl. 1, figs. 14a-c.

6652. Productus prattenianus Norwood. Plesiotypes.

6790. Upper Carboniferous. Plattsmouth, and twenty miles west of Nebraska City, Union Ranch, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Nebr. (Hayden), 1872, p. 163, pl. 2, figs. 5a-c.

= Productus cora.

8466. **Productus prattenianus Norwood.** Plesiotypes. Upper Carboniferous. Exact locality unknown.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 113, pl. 7, figs. 1a-1c.

=Productus cora.

15110. **Productus prattenianus Norwood**. Plesiotypes. Upper Carboniferous. White Pine District, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 72, pl. 7, figs. 7, 7a.

= Productus cora.

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- 6993. Productus punctatus (Martin). Plesiotype.
  Upper Carboniferous. Nebraska City, Nebraska.
  - Meek, Final Rept. U. S. Geol. Surv. Nebr. (Hayden), 1872, p. 169, pl. 2, fig. 6; pl. 4, fig. 5.
  - 8467. Productus punctatus (Martin). Plesiotypes. 8468. Upper Carboniferous. Grass Mountain, Ely Range. Nevada, and Madison County, Iowa.
    - White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 114, pl. 7, figs. 2a-2c.
- 35180. Productus scabriculus (Martin). Plesiotype.

  Madison (Miss.). Crowfoot Ridge, Gallatin Range, Yellowstone National Park.
  - Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 531, pl. 6, figs. 7a, 7b, 7c, 7d.
- 15061. Productus semireticulatus (Martin). Plesiotypes
  Upper Carboniferous. West of Fort Laramie, Wyoming.
  Hall, Stansbury's Expl. and Surv. Valley Great Salt Lake, I'tal.
  1852, p. 411, pl. 3, fig. 3.
- 15059. Productus semireticulatus (Martin). Plesiotypes Upper Carboniferous. West of Fort Laramie, Wyoming.

  Hall, Stansbury's Expl. and Surv. Valley Great Salt Lake, Util. 1852, p. 411, pl. 3, figs. 5a, 5b.

  = Productus cora.
  - 6532. Productus semireticulatus (Martin). Plesiotype Upper Carboniferous. Nebraska City, Nebraska. Meek, Final Rept. U. S. Geol. Surv. Nebr. (Hayden), 1872, p. 19pl. 5, figs. 7a, 7b.
- 8524. Productus semireticulatus (Martin). Plesiotype Upper Carboniferous. Southern Iowa. White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 187 p. 111, pl. 8, fig. 1c.
- Lower Carboniferous. North of Snowstorm Hill. Per Canyon, Oquirrh Mountains, Utah.

  Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II.

1877, p. 267, pl. 5, figs. 5, 6.

- 14299. Productus semireticulatus (Martin). Plesiotype Upper Carboniferous. White Pine District, Nevada.

  Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, P. S. pl. 7, fig. 5.
- 35181. Productus semireticulatus (Martin). Plesiotype 35182. Madison (Miss.). Crowfoot Ridge, Gallatin Range, ar Conant Creek, Teton Range, Yellowstone National Park.
  - Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 9-pl. 69, figs. 8a-8d.

to Hermosa and Weber (Upper Carb.). Durango quadrangle and Leadville district, Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 358, pl. 2, figs. 1-1c; 2-2b; 3-3b; 4-4b.

8523. **Productus semireticulatus ivesi Newberry**. Plesiotypes. Upper Carboniferous. Exact locality unknown.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 111, pl. 8, figs. 1a, 1b.

652. **Productus semistriatus** Meek. Cotypes. Upper Carboniferous. Timpanogos Canyon, near Utah Lake, Utah.

Meek, Proc. Acad. Nat. Sci. Phila., 1860, p. 309; Rept. Expl. Great Basin of Utah, Simpson, 1876, p. 349, pl. 1, figs. 7a, b; Rept U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 74, pl. 7, figs. 8, 8a.

13820. Productus (Productella) shumardianus (Hall). Plesiotype Middle and Upper Devonian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 129, pl. 14, fig. 1. = Productella shumardiana.

13817. Productus (Productella) speciosus (Hall). Plesiotype. Upper Devonian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 133, pl. 13, fig. 8. = Productella speciosa.

630. Productus subaculeatus Murchison? Plesiotypes.

Upper Devonian. West side of Buell Valley, east of
Eureka, Nevada.

Meek, Rept. Expl. Great Basin of Utah, Simpson, 1876, p. 345. pl. 1, figs. 3a-3c.

= Productella subaculeata.

13820. Productus subaculeatus Murchison? Plesiotypes.
14014. Upper Devonian. White Pine and Eureka Districts,
Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 36, pl. 3, figs. 7, 7b.

13822. Productus (Productella) subaculeatus (Murchison).

Middle and Upper Devonian. Lower Carboniferous.

Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 128, pl. 7, fig. 2, pl. 13, figs. 19, 19a.

= Productella subaculeata.

14301.

15141. Productus subhorridus Meek. Cotypes.

Upper Carboniferous. Moleen Peak, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV. Pt. I, 1877, p. 75, pl. 7, figs. 3-3b.

6868. Productus symmetricus McChesney.

Upper Carboniferous. Rockford, near Nebraska City,
Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Nebr. (Hayden), 1872, p. 167, pl. 5, figs. 6a, 6b; pl. 8, fig. 13.

11788. Productus symmetricus McChesney. Plesiotypes. Upper Carboniferous. La Salle County, Illinois.

White, Thirteenth Ann. Rept. Geol. Surv. Ind., 1884, p. 123, pl. 25, figs. 1, 2.

13821. Productus (Productella) truncatus (Hall). Plesiotype.
Middle Deyonian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 131, pl. 14, fig. 2. = Strophalosia truncata.

14579. Proetus (Phæton) denticulatus Meek. Cotypes.
 Middle Devonian. West side Steptoe Valley, Nevada.
 Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 49.
 pl. 1, figs. 10-10b.

=Phæthonides denticulatus.

43021. Proetus haldemani Hall.

Plastotype.

Hamilton (Dev.). Pennsylvania.

Hall and Clarke, Nat. Hist. New York, Pal. VII, 1888, p. 113, pl. 21, figs. 7, 8.

43016. Proetus hesione Hall. Schoharie (Dev.). Schoharie, New York.

Hall and Clarke, Nat. Hist. New York, Pal. VII, 1888, p. 93pl. 20, figs. 15, 16.

14243. Proetus loganensis Hall and Whitfield. Holotype. Waverly (Miss.). Logan Canyon, Wahsatch Range, Utah Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II. 1877, p. 264, pl. 4, fig. 33.—Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 577, pl. 71, fig. 15a.

43020. Proetus nevadæ Hall and Clarke. Plastotype.

Devonian. Combs Peak, Eureka District, Nevada.

Hall and Clarke Not Hist New York Pal VIII 2000

Hall and Clarke, Nat. Hist. New York, Pal. VII, 1888, p. 115, pl. 23, fig. 19.

14242. Proetus peroccidens Hall and Whitfield. Cotypes. 15236. Waverly (Miss.). Dry Canyon, Oquirrh Mountains, and Ogden Canyon, Wasatch Range, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II 1877, p. 262, pl. 4, figs. 28-32.—Girty, Mon. XXXII, Pt. II U. S. Geol. Surv., 1899, p. 576, pl. 71, figs. 14a, b.

43019. Proetus? planimarginatus Meek.
Devonian. Sylvania, Ohio.
Meek, Geol. Surv. Ohio, Pal. I, 1873, p. 233, pl. 23, fig. 3.

46280. Prolobella striatula Ulrich. Holotype.
Trenton (Ord.). Near Pleasant Grove, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II,

38159. **Promylacris harei** Scudder. Holotype. Upper Coal Measures. Kansas City, Missouri.

1894, p. 532, pl. 35, fig. 27.

Scudder, Bull. No. 124, U. S. Geol. Surv., 1895, p. 48, pl. 2, fig. 3.

38045. **Promylacris rigida** Scudder. Holotype. Upper Coal Measures. Braidwood, Illinois.

Scudder, Mem. Boston Soc. Nat. Hist., IV, 1890, p. 405, pl. 31, fig. 6; Foss. Insects N. America, I, 1890, p. 379-381, pl. 23, fig. 6; Bull. 124, U. S. Geol. Surv., 1895, p. 50, pl. 3, fig. 1.—
Sellards, Amer. Journ. Sci. (4), XVIII, 1904, p. 221, text fig. 36 (on p. 223).

38158. **Promylacris testudo** Scudder. Plesiotype. Upper Coal Measures. Mazon Creek, Grundy County, Illinois.

Scudder, Bull. No. 124, U. S. Geol. Surv., •1895, p. 49, pl. 2, fig. 2.

26438. Pronorites cyclolobus arkansiensis Smith. Holotype.
Lower Coal Measures. Pilot Mountain, Carroll County,
Arkansas.

Smith, Proc. Amer. Phil. Soc., XXXV, 1897, p. 57 (extract), pl. 24, figs. 1-4; Mon. XLII, U. S. Geol. Surv., 1903, p. 43, pl. 12, figs. 12-15.

40886. Protaster miamiensis Miller. Cotypes. Richmond (Ord.). Near Waynesville, Ohio.

Miller, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 116, pl. 5, figs. 6, 6b.

6511. Prothyris elegans Meek. Cotypes. Upper Carboniferous. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Nebr., 1872, p. 223, pl. 10, figs. 9a, 9b; Amer. Journ. Conch., VII, 1891, p. 8, pl. 1, fig. 3.

135733. Protocardia jamaicensis Dall. Holotype. Oligocene. Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1114, pl. 48, fig. 3.

1949. Protocardia (Leptocardia?) pertenuis (Meek and Hayden).
Holotype.

Fox Hills (Cret.). Deer Creek, North Platte, Wyoming.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 176, text figs.
13, 14.

See Cardium pertenue.

7897. Protocardia salinaensis (Meek). Holotype and paratype.
Mentor (Cret.). Twelve miles southwest of Salina, Kansas.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 174, pl. 2, figs.
13a-d.

298. Protocardia (Leptocardia) subquadrata (Evans and Shumard). Plesiotypes
Fox Hills (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 175, pl. 29, fg.

15400. Protocaris marshi Walcott. Holotype Lower Cambrian. Parker's Farm, Georgia, Vermont. Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 148, pl. 15, fg 1; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 629, pl. 81 fig. 6.

43287. Protocrisina exigua Ulrich. Figured sections of cotype 43288. Trenton (Ord.). Montreal, Canada; Trenton Falls, New York.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 405, pl. 29, fig. 4c; pl. 53

figs. 11-11e.

46537. Protoscolex covingtonensis Ulrich. Holotype.
Utica (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., I, 1879, p. 89, pl. 4, fig.2

46538. Protoscolex ornatus Ulrich. Cotypes Utica (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., I, 1879, p. 90, pl. 4, fig. I, 18.

46539. Protoscolex simplex Ulrich.

Utica (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., I, 1879, p. 91, pl. 4, fg. 1

46540. Protoscolex tenuis Ulrich. Holotype.
Utica (Ord.). Covington, Kentucky.
Ulrich, Journ. Cincinnati Soc. Nat. Hist., I, 1879, p. 90, pl. 4, fig.:

15309. Protospongia fenestrata Salter. Plesiotype Middle Cambrian. Prospect Peak, Eureka District, Nevada Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 11, pl. 9, fgs. 5a, 5b; Bull. No. 3o, U. S. Geol. Surv., 1886, p. 90, pl. figs. 2-2b.

to
Black River (Ord.). Chatfield, West St. Paul, and extension of Cannon Falls, Minnesota.

Trenton (Ord.). Covington, Kentucky, and Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn. Fr.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Fr. Rept., III, Pt. II, 1897, p. 872, pl. 63, figs. 1-14.

45958. Protowarthia concinna Ulrich and Scofield. Holotya Richmond (Ord.). Spring Valley, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn. For Rept., III, Pt. II, 1897, p. 874, pl. 63, figs. 36-39.

45959. Protowarthia granistriata Ulrich. Cotypes. Utica (Ord.). Covington, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 870, pl. 63, figs. 28-30.

- 45961. **Protowarthia obesa** Ulrich. Cotypes. 45962. Trenton (Ord.). Curdsville and Danville, Kentucky.
  - Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 874, pl. 63, figs. 45-47.
- 45968 Protowarthia pervoluta Ulrich and Scofield. Cotypes. to Black River (Ord.). Chatfield and St. Paul, Minnesota; 45970. Curdsville, Kentucky.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 871, pl. 63, figs. 22-25.

- 45960. Protowarthia planodorsata Ulrich. Cotypes. Utica (Ord.). Covington, Kentucky.

  Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 871, pl. 63, figs. 31-35.
- 45971. Protowarthia rectangularis Ulrich and Scofield. Cotypes. 45972. Stones River (Ord.). Mineral Point and Beloit, Wisconsin.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 868, pl. 63, figs. 15-20.

- 45973. **Protowarthia subcompressa** Ulrich. Cotypes. 45974. Richmond (Ord.). Versailles, Indiana; Hanover, Ohio.

  Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 873, pl. 63, figs. 40–44.
- 17454. Protypus? clavatus (Walcott). Holotype.
  Lower Cambrian. Washington County, New York.
  Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 656, pl. 98, fig. 4.

See Ptychoparia? (subgenus?) clavata.

- 15424. Protypus hitchcocki (Whitfield). Plastotype. Lower Cambrian. Parker's Quarry, Georgia, Vermont.

  Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 211, pl. 31, fig. 4;
  Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 655, pl. 98, fig. 6.
- 15421. Protypus senectus (Billings). Plesiotype.
  Lower Cambrian. East of Swanton, Vermont.

  Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 213, pl. 31, figs. 2-2c; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 655,

pl. 98, figs. 7-7c.

43788. Proutella discoidea Prout. Cotype and figured section.

Keokuk (Miss.). Keokuk, Iowa. (Nauvoo, Illinois, in error.)

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 674, pl. 69, figs. 4 a-d.

20102. Psammobia obscura White. Cotypes.
Puget (Cret.). Palace Camp and Carbonado, Washington.
White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 61, pl. 10, figs. 4-6.

12328. Psammobia? prematura Whitfield. Cotypes
Jurassic. East of Belle Fourche River, near Bear Lodge
Butte, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 374, pl. 5, fig. 31.

156871. Psammobia (Gobræus) wagneri Dall. Holotype.
Pliocene. Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 977. pl. 25, fig. 10.

156881. **Psammosolen cummingsianus** (Dunker). Plesiotype. Pliocene. Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 961, pl. 28, fig. 15.

292. Pseudobuccinum nebrascense (Meek and Hayden).

Holotype.

Fox Hills (Cret.). Moreau River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., 1857, p. 140.—
Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 350, pl. 31.
figs. 5 a-d.

See Buccinum? nebrascensis.

35068. Pseudocrinites abnormalis Schuchert. Holotype.
Manlius (Sil.). Near Keyser, West Virginia.

Schuchert, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 231, text fig. 30, pl. 35, figs. 10-12.

35070. Pseudocrinites clarki Schuchert. Cotypes.
Manlius (Sil.). Near Keyser, West Virginia.

Schuchert, Amer. Geol., XXXII, 1903, p. 237; Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 233, pl. 36, figs. 4-7; pl. 39-fig. 14.

35066. **Pseudocrinites claypolei** Schuchert. Holotype Manlius (Sil.). Clark's Mills, near New Bloomfield, Pennsylvania.

Schuchert, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 232 pl. 37, fig. 1.

35065. Pseudocrinites elongatus Schuchert. Holotype Manlius (Sil.). Pleasant Valley, Bedford County, Pennsylvania.

Schuchert, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 235 text fig. 31; pl. 35, figs. 6, 7.

35071. **Pseudocrinites gordoni** Schuchert. Holotype and paratype Manlius (Sil.). Near Keyser, West Virginia.

Schuchert, Amer. Geol., XXXII, 1903, p. 235; Smithsonian Mis Coll., Quart., XLVII, 1904, pp. 229, 230, text fig. 29; pl. ≠ figs. 8-12; pl. 39, figs. 11-13.

35072. Pseudocrinites perdewi Schuchert. Holotype and paratype.
Manlius (Sil.). Near Keyser, West Virginia.

Schuchert, Amer. Geol., XXXII, 1903, p. 238; Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 236, text fig. 32; pl. 36, figs. 1-3; pl. 39, figs. 8-10.

35069. Pseudocrinites stellatus Schuchert. Holotype.
Manlius (Sil.). Near Keyser, West Virginia.

Schuchert, Amer. Geol., XXXII, 1903, p. 236; Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 232, pl. 35, figs. 8, 9; pl. 39, fig. 7.

35067. **Pseudocrinites subquadratus** Schuchert. Holotype.
Manlius (Sil.). Devils Backbone, near Cumberland,
Maryland.

Schuchert, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 234, pl. 35, figs. 4, 5.

30186. Pseudodiadema emersoni Clark. Cotype.

Turassic. Taylorsville. California.

Clark, Bull. No. 97, U. S. Geol. Surv., 1893, p. 45, pl. 12, figs. 28-e.

8311. Pseudodiadema hilli Clark. Holotype.
Austin (Upper Cret.). Texas.

Clark, Johns Hopkins Univ. Circ. No. 87, 1891, p. 76.

=Diplopodia hilli.

12322. Pseudomonotis (Eumicrotis) curta (Hall). Plesiotypes.
Jurassic. Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 354, pl. 3, figs. 24, 25.

35305. Pseudomonotis equistriata Beede. Plesiotypes.
Rico (Upper Carb.). Scotch Creek, Rico quadrangle,
Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 428, pl. 8, fig. 5.

35304. Pseudomonotis kansasensis Beede. Plesiotype. Rico (Upper Carb.). Scotch Creek, Rico quadrangle, Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 428, pl. 8, fig. 4.

12269. Pseudomonotis (Eumicrotis) orbiculata Whitfield

Cctypes.

Jurassic. Redwater Valley, Black Hills, South Dakota.
 Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 356, pl. 3, figs. 17-19.

6516. **Pseudomonotis radialis** (Phillips)?? Plesiotypes. Upper Carboniferous. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Nebr. (Hayden), 1872, p. 201, pl. 9, fig. 3.

46281. Psiloconcha elliptica Ulrich.

Cotypes.

Richmond (Ord.). Clarksville, Ohio.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 667, pl. 52, figs. 3, 4; Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 530, figs. 42c, d.

46283. Psiloconcha grandis Ulrich.

Holotype.

Richmond (Ord.). Waynesville, Ohio.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 665, pl. 52, figs. 1, 2; Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 530, figs. 42a, b.

46284. Psiloconcha inornata Ulrich.

Cotypes.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 667, pl. 52, figs. 11, 12.

46285. Psiloconcha minima Ulrich.

Holotype.

Utica (Ord.). Covington, Kentucky.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 669, pl. 52, figs. 8, 9.

46286. Psiloconcha minnesotensis Ulrich.

Holotype.

Trenton (Ord.). Near Pleasant Grove, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 531, pl. 36, figs. 31, 32.

46288. Psiloconcha sinuata Ulrich.

Cotypes.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 668, pl. 52, figs. 15, 16.

46290. Psiloconcha subovalis (Ulrich). Holotype and plesiotypes. 46291. Lorraine (Ord.). Morrow, Ohio.

Utica (Ord.). Near Covington, Kentucky.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 666, pl. 52, figs. 5-7.

See Orthodesma subovale.

46289. Psiloconcha subrecta Ulrich.

Holotype.

Richmond (Ord.). Waynesville, Ohio.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 667, pl. 52, figs. 13, 14.

46292. Psiloconcha tenuistriata Ulrich.

Holotype.

Utica (Ord.). Covington, Kentucky.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 668, pl. 52, fig. 10.

46287. Psilonychia perangulata Ulrich.

Holotype.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 649, pl. 51, figs. 1-3.

114881. Pteria (argentea var.?) chipolana Dall.

Holotype.

Oligocene. Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 189 p. 669.

8771. Pteria (Oxytoma) erecta White. Cotypes. Colorado (Cret.). Lower Potato Valley, Utah.

White, Proc. U. S. Nat. Mus., III, 1880, p. 157; ibid., IV, 1881, p. 139, figs. 7, 8.

= Avicula gastrodes.

12332. Pteria (Pseudopteria) fibrosa (Meek and Hayden).

Plesiotype.

Fort Pierre (Cret.). Cheyenne River, near Rapid Creek, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 386, pl. 7, fig. 5.

=Avicula fibrosa.

460. Pteria (Pseudoptera) fibrosa (Meek and Hayden).

Holotype and paratypes.

Fox Hills (Cret.). Forks of Cheyenne River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 36, pl. 17, figs. 17c, 17d.

=Avicula? fibrosa.

7789. Pteria (Oxytoma?) gastrodes Meek. Holotype. Colorado (Cret.). Coalville, Utah.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879, p. 280, pl. 10, fig. 1a.

=Avicula gastrodes.

324. Pteria linguiformis (Evans and Shumard). Plesiotypes. Fort Pierre (Cret.). Fox Hills, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 32, pl. 16, figs. 1c, 1d.

=Avicula linguiformis.

12337. Pteria linguiformis (Evans and Shumard). Plesiotypes.
Fort Pierre (Cret.). South Fork of Cheyenne River, near
French Creek, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 384, pl. 7, figs. 2, 3.

=Avicula linguiformis.

461. Pteria linguiformis subgibbosa (Meek). Holotype. Fox Hills (Cret.). Long Lake, North Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 33, pl. 28, fig. 12.

=Avicula linguiformis subgibbosa.

1893. Pteria munsteri (Bronn). Plesiotypes.

Jurassic. Wind River Valley, Wyoming.

Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 86, text figs. A, B.

= Avicula wyomingensis.

See Avicula mucronata.

43724. Ptilodictya hilli James. Plesiotype and figured sections. Lorraine (Ord.). Boyle County, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, pl. 7, figs.7, 72. = Escharopora hilli.

43477. Ptilodictya? libana Safford.

Cotypes.

Stones River (Ord.). Lebanon, Tennessee.

Safford, Geol. Tenn., 1869, p. 286.

43726. Ptilodictya maculata Ulrich. Cotypes and figured sections. Lorraine (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 163, pl. 6. fig. 17, and pl. 7, figs. 4, 4a; Geol. Surv. III., VIII, 1890, p. 317, fig. 6b.

=Escharopora maculata.

43420. Ptilodictya magnifica Ulrich. Figured section of plesiotype. Richmond (Ord.). Oxford, Ohio.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 391, figs. 11a-c.

43725. Ptilodictya pavonia (D'Orbigny). Plesiotype and figured sections.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 163, pl. 7. figs. 3-3d.

= Escharopora pavonia.

43274. Ptilodictya perelegans Ulrich.

Holotype.

Richmond (Ord.). Near Clarksville, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., I, 1878, p. 94, pl. 4 figs. 16, 16a.

=Graptodictya perelegans.

43727. Ptilodictya ramosa Ulrich.

Holotype.

Stones River (Ord.). Lebanon, Tennessee.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 164, pl.; figs. 5-5a.

=Escharopora ramosa.

43818. Ptilodictya subrecta Ulrich.

Cotypes

Black River (Ord.). Minneapolis, Minn.

Ulrich, Fourteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn. 1886, p. 63.

=Escharopora subrecta.

8065. Ptilodictya triangulata White.

Cotype

Upper Carboniferous. Yampa Plateau, Colorado.

White, Bull. No. 5, U. S. Geol. Surv. Terr., 1879, p. 214; Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1880, p. 131, pl. 83, fg. 3, 3a.

=Prismopora triangulata.

9447. Ptilodictya triangulata White. Plesiotypes.
Upper Carboniferous. Cebolla and Coyote creeks, New
Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., III, Suppl. 1881, p. 24, pl. 4, fig. E.

- = Prismopora triangulata.
- 43418. Ptilodictya variabilis Ulrich. Figured section of plesiotype. Richmond (Ord.). Blanchester, Ohio.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 304, fig. 2a; p. 319, fig. 6a.

= Ptilodictya nodosa.

43476. Ptilodictya whiteavesi Ulrich. Figured section of cotype. Richmond (Ord.). Stony Mountain, Manitoba.

Ulrich, Geol. Surv. Canada, Contr. Micro-Pal. Cambro-Sil., Pt. II, 1889, p. 44, pl. 8, figs. 1–1e.

- 43786. Ptilopora cylindracea Ulrich. Cotypes. Keokuk (Miss.). Kings Mountain, Kentucky.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 623, pl. 66, figs. 2, 2b.
- 43432. Ptilopora paupera Ulrich. Cotypes. Keokuk (Miss.). Kings Mountain, Kentucky.
  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 624, pl. 66, fig. 10.
- 43787. Ptilotrypa obliquata Ulrich. Cotypes and figured sections. Richmond (Ord.). Wilmington, Illinois.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 531, pl. 30, figs. 1b, 1d, 1e.
- 24578. Ptychaspis minuta Whitfield? Plesiotype.
  Upper Cambrian. Lookout Mountain, Eureka District,
  Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 60, pl. 10, fig. 23.

24579. Ptychaspis pustulosa Hall and Whitfield. Cotypes.
Upper Cambrian. West side of Pogonip Mountain, White
Pine District, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 223, pl. 2, fig. 27.

Ptychites cummingsi White. Cotype.
Permian. Military Crossing of the Big Wichita, Baylor
County, Texas.

White, Amer. Nat., XXXIII, 1889, p. 117, pl. 1, figs. 4-8.

= Waagenoceras cummingsi.

12324. Ptychoceras crassum Whitfield. Cotypes.
Fort Pierre (Cret.). Old Woman Fork, Black Hills,
Wyoming.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 459, pl. 16, figs. 3, 4, 6.

21870. Ptychoceras crassum Whitfield. Plesiotypes. Fort Pierre (Cret.). Near Boulder, Colorado.

Hyatt, Proc. Amer. Philos. Soc., XXXII, 1894, p. 579, pl. 4 figs. 18-21.

12279. Ptychoceras meekanum Whitfield. Cotypes
Fort Pierre (Cret.). Beaver Creek, Black Hills, South
Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 18% p. 457, pl. 16, fig. 1.

- 21092. Ptychoceras texanum Shumard. Plesiotypes.
  Navarro (Cret.). Chatfield, Navarro County, Texas.
  Hyatt, Proc. Amer. Philos. Soc., XXXII, 1894, p. 580.
- 43123. Ptychocladia agellus Ulrich and Bassler. Holotype.
  Upper Coal Measures. Near Springfield, Illinois.

  Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLV, p.
  290, pl. 67, fig. 10, pt. 13.
- 40774. Ptychocrinus parvus (Hall). Plesiotype. Lorraine (Ord.). Cincinnati, Ohio.

  Wachsmuth and Springer, N. A. Crinoidea Camerata, Mem. Mus. Comp. Zool., XXI, 1897, p. 199, pl. 18, fig. 2.

  See Reteocrinus gracilis.
- 30231. Ptychomya ragsdalei (Cragin). Plesiotype
  Buda (Lower Cret.). Near Austin, Texas.
  Shattuck, Bull. No. 205, U. S. Geol. Surv., 1903, p. 24, pl. 12.
- 15435. Ptychoparia adamsi (Billings). Plesiotype. Lower Cambrian. Georgia, Vermont.

  Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 195, pl. 26, fgs. 1-1b; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 649, p. 96, figs. 1-1b.
- 24642. Ptychoparia (Euloma?) affinis Walcott. Cotype.
  Upper Cambrian. East of Hamburg Mine, Eureka Ditrict, Nevada.
  - Walcott, Mon. VIII, U. S. Ceol. Surv., 1884, p. 54, pl. 10, fig. 1: ibid., XXXII, Pt. II, 1899, p. 457, pl. 65, fig. 8.
- 24571. Ptychoparia? annectans Walcott. Cotype
  Lower Pogonip (Upper Cambrian). Ridge east of Harburg Ridge, Eureka District, Nevada.
  Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 91, pl. 12, fig. 19
  - 75234. Ptychoparia antiquata (Salter). Plesiotype Flathead (Middle Cambrian). Vellowstone National Park Walcott, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 456.7-65, figs. 7, 7a.

24656. Ptychoparia anytus Hall and Whitfield. Plesiotype.
Upper Cambrian. New York and Secret Canyons, Eureka
District.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 56, pl. 9, fig. 26. See Crepicephalus (Loganellus) anytus.

18332. Ptychoparia? attleborensis Shaler and Foerste. Plesiotype.
Lower Cambrian. Conception Bay, Newfoundland.

Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 649, pl. 95, fig. 2.

24577. Ptychoparia (Solenopleura?) breviceps Walcott.

Holotype.
Upper Cambrian. North of Adams Hill, Eureka District,
Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 49, pl. 10, fig. 9.

- 23854. Ptychoparia burnetensis Walcott. Cotypes. Upper Cambrian. Tatur Hill, Burnet County, Texas.

  Walcott, Proc. U. S. Nat. Mus., XIII, 1890, p. 272, pl. 21, fig. 1.
- 17454. Ptychoparia? (subgenus?) clavata Walcott. Holotype. Lower Cambrian. Washington County, New York.

  Walcott, Amer. Journ. Sci. (3), XXXIV, 1887, p. 198, pl. 1, fig. 3.

  = Protypus? clavatus.
- 23855. Ptychoparia connata Walcott. Holotype. Upper Cambrian. Eau Claire, Wisconsin. Walcott, Proc. U. S. Nat. Mus., XIII, 1890, p. 272, pl. 21, fig. 2.
- 35227. Ptychoparia (?) diademata (Hall). Plesiotypes.

  Middle Cambrian. Soda Butte Creek, Yellowstone
  National Park.

Walcott, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 462, pl. 64, figs. 2, 2a, 2b.

35228. Ptychoparia (?) diademata (Hall). Plesiotype.
St. Croix (Middle Cambrian). Near Hudson, Saint Croix
County, Wisconsin.

Walcott Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 462, pl. 64, fig. 2c.

24615. Ptychoparia (Euloma?) dissimilis Walcott. Cotype.
Middle Cambrian. New York Canyon, Eureka District,
Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 51, pl. 9, fig. 28.

17455. Ptychoparia? fitchi Walcott. Cotype.

Lower Cambrian. Near North Granville, New York.

Walcott, Amer. Journ. Sci. (3), XXXIV, 1887, p. 197, pl. 1, fig. 6; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 650, pl. 96, fig. 5.

- 15443. Ptychoparia housensis Walcott. Holotype.
  Middle Cambrian. House Range, Antelope Springs, Utah.
  Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 201, pl. 25, fig. 5.
- 24614. Ptychoparia læviceps Walcott. Cotype.
  Middle Cambrian. Secret Canyon, Eureka District, Nevada.
  Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 54, pl. 10, figs.
  17, 18.
- 24611. Ptychoparia (?) linnarssoni Walcott. Cotype. Middle Cambrian. Secret Canyon, Eureka District, Nevada. Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 47, pl. 9, figs. 18, 18a.
- 23857. Ptychoparia llanoensis Walcott. Cotypes.
  Upper Cambrian. Packsaddle Mountain, Llano County.
  Texas.
  - Walcott, Proc. U. S. Nat. Mus., XIII, 1890, p. 272, pl. 21, figs.; 4, 5; Mon. XXXII, U. S. Geol. Surv., Pt. II, 1899, p. 482 pl. 64, fig. 4.
- 24613. Ptychoparia (Pterocephalus) occidens Walcott. Holotype Upper Cambrian. East of Hamburg Ridge, Eureka District, Nevada.
  - Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 58, pl. 9, fig. 2.
- 24612. Ptychoparia occidentalis Walcott. Cotype. Middle Cambrian. Secret Canyon, Eureka District, Nevada Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 51, pl. 10, fig. 5
- 24610. **Ptychoparia oweni** Meek and Hayden. Plesiotype Middle Cambrian. Eureka District, Nevada.
  - Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 55, pl. 10, fgs. 3, 3a.
  - See Agraulos oweni, Arionellus (Crepicephalus) oweni and Conocoryphe (Ptychoparia) gallatinensis.
- 35231. Ptychoparia penfieldi Walcott. Cotype Flathead (Middle Cambrian). Crowfoot section, Gallatt Range, Yellowstone National Park.
  - Walcott, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 89 pl. 65, figs. 4, 4a, 4b.
- 24608. Ptychoparia (?) pernasutus Walcott. Cotype Upper Cambrian. East of Hamburg Ridge, Eureka letrict, Nevada.
  - Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 49, pl. 10. \$\pi\$ 8-8b.
  - = Anomocare pernasutus.
- 23859. Ptychoparia pero Walcott.

Cotype

Upper Cambrian. Morgans Creek, Burnet County, Texting Walcott, Proc. U. S. Nat. Mus., XIII, 1890, p. 274, pl. 21, fg.

15434. Ptychoparia piochensis Walcott. Cotype.
Middle Cambrian. Near Pioche, Nevada.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 201, pl. 26, figs. 2-2b; pl. 28, figs. 1-1e.

15441. **Ptychoparia? prospectensis** Walcott. Holotype. Lower Cambrian. Prospect Peak, Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 46, pl. 9, fig. 20; Bull. No. 30, U. S. Geol. Surv., 1886, p. 202, pl. 27, fig. 5.

15432. Ptychoparia quadrans (Hall and Whitfield). Cotypes.
Middle Cambrian. Box Elder Canyon, Wahsatch Mountains, Utah.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 199, pl. 29, figs. 4-4b.

See Crepicephalus? (Loganellus) quadrans.

24641. **Ptychoparia similis** Walcott. Cotype. Upper Cambrian. Secret Canyon, Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 52, pl. 10, fig. 10.

24609. Ptychoparia similis robustus Walcott. Holotype.
Upper Cambrian. Secret Canyon, Eureka District,
Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 53, pl. 1, figs. 9, 9a.

23860. Ptychoparia suada Walcott. Holotype.

Upper Cambrian. Morgans Creek, Burnett County,
Texas.

Walcott, Proc. U. S. Nat. Mus., XIII, 1890, p. 274, pl. 21, fig. 9.

15442. Ptychoparia subcoronata (Hall and Whitfield). Cotypes. Lower Cambrian. Ute Peak, Wahsatch Range, Utah.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 205, pl. 28, fig. 4;
Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 652, pl. 96, fig. 6.
See Conocephalites subcoronatus.

15436. Ptychoparia teucer (Billings). Plesiotype.
Lower Cambrian. Near Highgate Springs, Vermont.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 197, pl. 26, fig. 3; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 652, pl. 96, fig. 3.

23861. Ptychoparia? urania Walcott. Cotypes.
Upper Cambrian. Packsaddle Mountain, Llano County,
Texas.

Walcott, Proc. U. S. Nat. Mus., XIII, 1890, p. 274, pl. 21, figs. 10, 11.

15437. Ptychoparia vulcanus (Billings). Plesiotype. Lower Cambrian. Georgia, Vermont.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 198, pl. 26, fig. 4; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 653, pl. 96, fig. 4. 35225. Ptychoparia (Lonchocephalus) wisconsensis (Owen).

Middle Cambrian. Soda Butte Creek, Yellowstone National Park.

Walcott, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 461, pl. 64, figs. 1, 1a.

35226. Ptychoparia (Lonchocephalus) wisconsensis (Owen).
Plesiotypes.

St. Croix (Middle Cambrian). Four miles southeast of Lake City, Minnesota.

Walcott, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 461, pl. 64, figs. 1b, 1c.

14575. Ptychophyllum? infundibulum Meek. Cotypes.
Upper Devonian. Treasure Hill, White Pine District,
Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 22, pl. 2, figs. 1-1b.

14366. Ptychopteria protoforme Walcott. Holotype.

Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 235, pl. 8, fig. 5.

124930. Ptychosalpinx (Buccinum) tuomeyi Lea. Cotypes 124931. Miocene. James River, Virginia.

Lea, Trans. Amer. Philos. Soc. (2), IX, 1845, p. 271, pl. y. fig. 97.—Dall, Trans. Wagner Free Inst. Sci. Phila., III, P. II, 1892, p. 237.

35331. Pugnax utah (Marcou). Plesiotype Maroon (Upper Carb.). Southeast of Italian Peak, Elk Mountain, Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, pl. 7, figs. 14-14h.

22918. Pugnellus fusiformis (Meek). Plesiotypes Colorado (Cret.). Huerfano Park, Colorado.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 148, pl. 3 figs. 7-11.

See Anchura? fusiformis and Lispodesthes? obscurata.

9003. Pupa arenula White.

Green River (Eocene). Henrys Fork, near Green River

reen River (Eocene). Henrys Fork, near Green River City, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 189; p. 46, pl. 19, figs. 8a, 8b; Third Ann. Rept. U. S. Geol. Sur 1883, p. 456, pl. 29, fig. 19.

9002. Pupa atavuncula White.

Green River (Eocene). Henrys Fork, near Green River City, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 183 p. 46, pl. 19, fig. 9a; Third Ann. Rept. U. S. Geol. Sur 1883, p. 456, pl. 29, fig. 18.

9004. Pupa incolata White.

Holotype.

Eocene. Henrys Fork, Wyoming.

White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 456, pl. 29, figs. 15-17.

9004. Pupa (Leucocheila) incolata White. Holotype. Upper Green River (Eocene). Henrys Fork, near Green River City, Wyoming.

> White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 47, pl. 19, figs. 7a-c.

20074. Pupa leidyi Meek?

Plesiotypes.

Eocene. Nacimiento, New Mexico.

White, Bull. No. 34, U. S. Geol. Surv., 1886, p. 27, pl. 5, figs.

115493. Purpura miocenica Guppy. Holotype. Oligocene. Jamaica, British West Indies. Guppy, Geol. Mag., London, Dec. II, I, 1874, p. 410, pl. 16, fig. 9.

136023. Pyramidella (Sulcorinella) dodona Dall and Bartsch. Holotype. Oligocene. Oak Grove, Santa Rosa County, Florida. Dall and Bartsch, Proc. Biol. Soc. Washington, XVII, 1904, p. 14.

107118. Pyramidella (Longchæus) forulata Guppy. Holotype. Oligocene. Vendryes, Jamaica, West Indies. Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 315, pl. 28, fig. 13.

115642. Pyramidella (Longchæus) jamaicensis Dall. Holotype. Oligocene. Jamaica, West Indies. Dall, Proc. U. S. Nat. Mus., XIX, 1896, p. 315, pl. 29, fig. 10.

113681. Pyrazisinus? haitensis Dall. Holotype. Oligocene. Island in Lake Henriquillo, Santo Domingo, West Indies.

Dall, Proc. U. S. Nat. Mus., XIX, 1896, p. 319, pl. 29, fig. 8.

112530. Pyrazus (Pyrazisinus) campanulatus Heilprin. Plesiotype. Oligocene. Tampa, Florida.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, pl. 11, figs. 10, 10a; Pt. II, 1892, p. 288, pl. 15, figs. 2, 6, 10.

46296. Pyrenomœus' decipiens Ulrich. Cotypes. Lorraine (Ord.). Cincinnati, Ohio. Ulrich, Geol. Surv. Ohio, VII, 1893, p. 681, pl. 51, figs. 7, 8.

46297. Pyrenomœus subcuneatus Ulrich. Holotype. Utica (Ord.). Covington, Kentucky.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 682, pl. 51, fig. 6.

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498. Pyrgulifera humerosa Meek. Cotypes.

Bear River (Cret.). Bear River, near mouth of Sulphur

ar River (Cret.). Bear River, near mouth of Sulphu Creek, Wyoming.

Meek, Rept. Expl. Great Basin, of Utah, Simpson, 1876, p. 363, pl. 5, figs. 6a-c.

See Melania humerosa.

12470. Pyrgulifera humerosa Meek. Plesiotypes. 12499. Bear River (Cret.). Bear River, Wyoming.

White, Proc. U. S. Nat. Mus., V, 1882, p. 98, pl. 3, figs. 10-12.— Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 176, pl. 17, fig. 19; text fig. 6 on p. 177.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 460, pl. 6, figs. 4, 5.

See Melania humerosa.

498. Pyrgulifera humerosa (Meek). Cotypes and plesiotypes.

12471. Bear River (Cret.). Sulphur Creek, near Evanston, and

22332. Cokeville, Wyoming.

23105. White, Bull. No. 128, U. S. Geol. Surv., 1895, p. 55, pl. 8, figs. 23106. I-11; pl. 9, figs. 4-8.

23128. Pyrgulifera meekii White.

Cretaceous. Five miles west of north of Fairburg, Nebraska.

White, Proc. U. S. Nat. Mus., XVII, 1894, p. 135, pl. 8, fig. 13.

23107. Pyrgulifera stantoni White.

Bear River (Cret.). Cokeville, Wyoming.

Cotype.

White, Bull. No. 128, U. S. Geol. Surv., 1895, p. 57, pl. 9, figs. 1-3.

253. Pyrifusus (Neptunella) intertextus (Meek and Hayden).

Fort Pierre (Cret.). Yellowstone River, near Miles City.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 348, pl. 19, figs. 14a, 14b.

See Fusus intertextus.

257. Pyrifusus (Neptunella) newberryi (Meek and Hayden).
257a. Holotype and paratypes.

Fort Pierre (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol, Surv. Terr., IX, 1876, p. 346, text fig. 39, pl. 31, fig. 6a-f.

See Fusus newberryi.

254. Pyrifusus Neptunella subturritus (Meek and Hayden).

Holotype.

Fort Pierre (Cret.). Grand River, South Dakota.

Meek, Rept. U. S. Geol, Surv. Terr., IX, 1876, p. 347, text fig. 40, pl. 32, figs. 3a, 3b.

See Fusus subturritus.

Holotype.

9854. Pyrina parryi Hall.

Washita (Lower Cret.). Leon Springs, El Paso Road,
Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 144, pl. 1, figs. 1a-d.—Clark, Bull. No. 97, U. S. Geol. Surv., 1893, p. 59, pl. 24, figs, 1a-k.

252. Pyropsis bairdi (Meek and Hayden). Holotype and paratypes.

Fox Hills (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 369, pl. 31, figs. 10a, 10b.

See Pyrula bairdi.

252. Pyropsis bairdi rotula Meek. Cotypes. Fox Hills (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 371, text fig. 47.

22924. Pyropsis coloradoensis Stanton. Cotypes. Colorado (Cret.). Huerfano Park, Colorado.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 154, pl. 32, figs. 6-8.

252. Pyrula bairdi Meek and Hayden. Holotype and paratypes. Fox Hills (Cret.). Moreau River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 66.

= Pyropsis bairdi.

35400. Rafinesquina alternata ponderosa Hayes and Ulrich.
Holotype.

Lorraine (Ord.). Cincinnati, Ohio.

Hayes and Ulrich, U. S. Geol. Surv., Polio 95, 1903, illustration sheet, fig. 20.

107034. Rangia johnsoni (Dall).
Miocene. Near Vernal, Mississippi.

Dall Trans Wagner Free Inst Sci Phila III Pt IV

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 905, pl. 22, fig. 18.

See Gnathodon johnsoni.

Miocene. Shiloh, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 84, pl. 15, figs. 4-6.

= Mulinia minor.

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Eocene. San Fernando, Trinidad, British West Indies.

Woodward, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 591
pl. 26, fig. 18.

112520. Rapana tampaënsis Dall. Cotypes.

Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 153; ibid., Pt. II, 1892, p. 244, pl. 20, fig. 14.

17309. Raphistoma acuta Hall and Whitfield. Cotypes.
Pogonip? (Ord.). Ute Peak, Wahsatch Range, Utah.
Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 235, pl. 1, figs. 20-22.

17312. Raphistoma nasoni (Hall). Plesiotypes. Upper Pogonip (Ord.). Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 78, pl. 11, figs. 21, 21a.

=Eotomaria supracingulata.

45975. Raphistoma peracuta Ulrich and Scofield. Cotypes.
Black River (Ord.). Near Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 940, pl. 68, figs. 1-6.

45976. Raphistoma richmondense Ulrich. Holotype. Richmond (Ord.). Richmond, Indiana.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 941, pl. 68, figs. 7-9.

17316. Raphistoma? rotuliformis (Meek). Cotypes.

Lower Pogonip (Ord.?). Ute Peak, Utah.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 18, pl. 1, figs. 2-2b.

17315. Raphistoma? trochiscus (Meek). Cotypes. Upper Pogonip (Ord.). Ute Peak, Utah.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 19, pl. 1, figs. 3-3b.—White, Rept. U. S. Geogr. Surv. W. 100 Merid., IV, Pt. I, 1877, p. 77, pl. 4, figs. 13a-13c.

45977. Raphistomina denticulata Ulrich. Cotypes.
Black River (Ord.). Mercer County, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 943, pl. 68, figs. 21-23.

45978. Raphistomina lapicida (Salter). Plesiotype. Black River (Ord.). Near Lebanon, Tennessee.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 942, pl. 68, figs. 18-20.

46071. Raphistomina modesta Ulrich. Holotype. Stones River (Ord.). Murfreesboro, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 943, pl. 68, figs. 14-17.

45979. Raphistomina rugata Ulrich and Scofield. Holotype. Trenton (Ord.). Goodhue County, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 944, pl. 68, figs. 10-13.

46567. Rauffella filosa Ulrich. Cotypes. 46568. Black River (Ord.). St. Paul and Minneapolis, Minne-

Ulrich, Amer. Geol., III, 1889, p. 236, figs. 1, 2, 4; p. 237—Winchell and Schuchert, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 75, pl. F, figs. 16–18.

46569. Rauffella palmipes Ulrich. Cotypes.

Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Amer. Geol., III, 1889, p. 236, fig. 3; p. 238.—Winchell and Schuchert, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1893, p. 76, pl. F, figs. 19, 20.

24548. Receptaculites ellipticus Walcott. Holotype.
Upper Pogonip (Ord.). White Mountain, Goodwin Canyon, Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 67, pl. 11, fig. 12.

24635. Receptaculites elongatus Walcott. Cotypes. Upper Pogonip (Ord.). White Pine District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 66.

24636. Receptaculites mammillaris (Newberry ms.) Walcott.
Cotypes.
Upper Pogonip (Ord.). White Pine District, Nevada.
Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 65, pl. 11, fig. 11.

5894. Rensselæria lævis Meek. Cotypes.

5895. Base of Upper Devonian. Onion River and forty miles below Good Hope, Mackenzie River, Canada.

Meek, Trans. Chicago Acad. Sci., I, 1868, p. 108, pl. 13, figs. 8a-e; pl. 14, fig. 4.

= Newberria lævis.

12363. Requienia patagiata White.
Edwards (Cret.). Near Austin, Texas.

Cotypes.

White, Bull. No. 4, U. S. Geol. Surv., 1884, p. 6, pl. 1, figs. 1-8; pl. 2, figs. 1-4.

40774. Reteocrinus gracilis Wetherby. Holotype. Lorraine (Ord.). Cincinnati, Ohio.

Wetherby, Journ. Cincinnati Soc. Nat. Hist., IV, 1881, p. 83, pl. 2, figs. 2, 2a.

= Ptychocrinus parvus.

40757. Reteocrinus magnificus Miller. Plesiotype. Richmond (Ord.). Near Waynesville, Ohio.

Wachsmuth and Springer, N. A. Crinoidea Camerata, Mem. Mus. Comp. Zool., XXI, 1897, p. 181, pl. 9, fig. 2.

40756. Reteocrinus nealli (Hall). Plesiotype.
Richmond (Ord.). Clinton County, Ohio.

Wachsmuth and Springer, N. A. Crinoidea Camerata, Mem. Mus. Comp. Zool., XXI, 1897, p. 179, pl. 9, fig. 1a.

See Glyptocrinus nealli.

17939. Retepora archimedes Owen. Holoty
Warsaw (Miss.). Keokuk Rapids, Mississippi Rin
Iowa.

Owen, Rept. Geol. Surv. Wis., Iowa and Minn., 1852, pl. 4, ig. = Archimedes wortheni.

43434. Reteporella cinctata (Hall). Plesiotype as figured section

Hamilton (Dev.). Thedford, Ontario, Canada.

Ulrich, Geol. Surv. Ill., VIII, 1890, pl. 55, fig. 10 (as Phyllopa sp. indet.).

35188. Reticularia cooperensis (Swallow). Plesiotype Madison (Miss.). Crowfoot Ridge, Yellowstone Natur Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 555; 70, figs. 9a, 9b, 9c.

35187. Reticularia cooperensis (Swallow) var. Plesioty.

Madison (Miss.). Eureka District, Nevada.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 5%; 70, figs. 6a, 6b, 6c.

8537. Reticularia? peculiaris (Shumard). Plesiotra
Lower Carboniferous. Mountain Spring, Old Moral
Road, Nevada.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 55-70, figs. 8a, b.

See Spirifer (Martinia) peculiaris.

- 35245. Reticularia perplexa (McChesney).

  Upper Coal Meas. Krebs, Indian Territory.

  Girty, 19th Ann. Rept. U. S. Geol. Surv., 1900, p. 577. F. fig. 1a.
- 35189. Reticularia (?) subrotundata (Hall). Plesiot Madison (Miss.). Five miles above Monarch, on E Creek, Montana.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 87 70, figs. 7a, 7b.

Chipola (Oligocene). Chattahoochee River, and Grove, Yellow River, Florida.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 28; Trans. W. Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 59, fig. 9

113886. Retusa (Cylichnina) decapitata Dall.
Oligocene. Calhoun County, Florida.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 30; Trans. W-Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 59, fig. 22 Miocene. Natural Well, Duplin County, North Carolina.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 31; Trans. Wagner
Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 59, fig. 20.

131528. Retusa (Cylichnina) guercinensis Dall. Holotype.
Alum Bluff (Oligocene). Oak Grove, Santa Rosa County,
Florida.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 31; Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 59, fig. 17.

Miocene. Natural Well, Duplin County, North Carolina.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 31; Trans. Wagner
Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 59, fig. 25.

8511. Retzia mormonii (Marcou). Plesiotypes. Upper Carboniferous. Near Santa Fé, New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th. Merid., IV, Pt. I, 1876, p. 141, pl. 10, figs. 7a-7c.

=Hustedia mormoni.

6817. Retzia punctulifera Shumard. Plesiotypes.
Upper Carboniferous. Rock Bluff, Missouri River,
Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Nebr. (Hayden), 1872, p. 181, pl. 1, fig. 13; pl. 5, fig. 8.

= Hustedia mormoni.

8227. Retzia woosteri White. Plastotype. Upper Carboniferous? Eighteen miles north of Greeley, Colorado.

White, Bull. No. 5, U. S. Geol. Surv. Terr., 1879, p. 215; Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1880, p. 134, pl. 34, figs. 8a, 8b.—Girty, Prof. Paper No. 16, U. S. Geol. Surv., 1903, p. 302, pl. 1, figs. 11, 11a.

40772. Rhaphanocrinus sculptus Miller. Plesiotype. Richmond (Ord.). Waynesville, Ohio.

Wachsmuth and Springer, N. A. Crinoidea Camerata., Mem. Mus. Comp. Zoöl., XXI, 1897, p. 260, pl. 11, fig. 3.

See Glyptocrinus sculptus.

figs. 11, 12.

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158401. Rhectopsammia claibornensis Vaughan. Cotypes. 158402. Claibornian (Eocene). Claiborne and Jackson, Alabama. Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 184, pl. 21,

43708. Rhinidictya exigua Ulrich. Cotypes.

Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 131, pl. 8, figs. 6-10; Journ. Cincinnati Soc. Nat. Hist., XII, 1890, p. 184, figs. 9, 9a-d. 43603. Rhinidictya fidelis Ulrich. Cotypes and figured sections. Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 134, pl. 6, figs. 7, 7a, 7b, 8.

43606. Rhinidictya grandis Ulrich. Cotypes and figured sections. Stones River (Ord.). Dixon, Illinois.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 136, pl. 5, figs. 11, 12; pl. 6, figs. 19, 20.

43702. Rhinidictya humilis Ulrich.

Cotypes.

Trenton (Ord.). Cannon Falls, Minnesota.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XII, 1890, p. 185, figs. 10, 10a-b.

= Pachydictya pumila.

43709. Rhinidictya minima Ulrich. Cotypes and figured sections. Trenton (Ord.). Cannon Falls, Minnesota.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XII, 1890, p. 183, fgs. 8, 8a-c; Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 132, pl. 5, figs. 13-15, 18.

43610. Rhinidictya minima modesta Ulrich. Cotypes and figured sections.

Trenton (Ord.). Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I. 1893, p. 133, pl. 5, fig. 17.

43812. Rhinidictya mutabilis (Ulrich). Cotypes and figured

sections.

Black River (Ord.). Minneapolis and St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I. 1893, p. 125, pl. 6, figs. 1, 4, 5, 6, 12, 13; pl. 7, figs. 10-15, 25-28; pl. 8, figs. 1-3.

See Stictopora mutabilis.

43813. Rhinidictya mutabilis major (Ulrich). Cotypes.

Black River (Ord.). St. Paul and Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I 1893, p. 127.

See Stictopora mutabilis major.

43814. Rhinidictya mutabilis senilis Ulrich.

Cotype and figured sections

Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I 1893, p. 127, pl. 6, figs. 2, 3; pl. 7, figs. 16, 17.

43608. Rhinidictya neglecta Ulrich. Cotypes and figured sections Trenton (Ord.). Burgin, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt.1 1893, p. 130, pl. 5, figs. 22-25.

43609. Rhinidictya neglecta canadensis Ulrich. Holotype.
Trenton (Ord.). Ottawa, Canada.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 130.

43706. Rhinidictya nicholsoni Ulrich. Cotypes and figured sections. Stones River (Ord.). High Bridge, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 170, pl. 8, figs. 6, 6a, 6b.

43602. Rhinidictya paupera Ulrich.

Cotypes.

Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 129, pl. 5, figs. 19-21.

43605. Rhinidictya pediculata Ulrich. Cotypes. Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 137, pl. 7, figs. 1-5.

43607. Rhinidictya trentonensis (Ulrich). Plesiotypes and figured

Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 135, pl. 6, figs. 14-18; pl. 7, figs. 6-9.

See Dicranopora trentonensis.

34117. Rhipidomella oblata (Hall). Plesiotype.
Helderbergian (Lower Dev.). Atoka quadrangle, Indian
Territory.

Girty, Nineteenth Ann. Rept. U. S. Geol. Surv., 1900, p. 562, pl. 70, fig. 3a.

27769. Rhipidomella oblata emarginata (Hall). Plesiotypes.
34118. Helderbergian (Lower Dev.). Atoka quadrangle, Indian
Territory, and Big Sandy River Benton County

Territory, and Big Sandy River, Benton County, Tennessee.

Girty, Nineteenth Ann. Rept. U. S. Geol. Surv., 1900, p. 562, pl. 70, figs. 2a-2j.

26096. Rhizostomites admirandus Haeckel. Plastotype. Jurassic. Solenhofen, Germany.

Walcott, Mon. XXX, U. S. Geol. Surv., 1898, p. 76, pl. 42, fig. 2.

26103. Rhizostomites lithographicus Haeckel. Plesiotype.

Jurassic. Eichstätt, Germany.

Walcott, Mon. XXX, U. S. Geol. Surv., 1898, p. 83, pl. 41, fig. 1.

8032. Rhodocrinus vesperalis White. Holotype.

Sevier (Ord.). Knoxville, Tennessee.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 129, pl. 35, figs. 4a, 4b.

[Described as from Upper Carboniferous, but is from the Ordovician.]

= Diabolocrinus vesperalis.

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- 44106. Rhombopora angustata Ulrich. Cotypes. Keokuk (Miss.). Kings Mountain, Kentucky.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 652, pl. 70, figs. 6, 6a.
- 43713. Rhombopora armata Ulrich. Holotype. Kaskaskia (Miss.). Tateville (Sloans Valley), Kentucky.

  Ulrich, Journ. Cincinnati Soc. Nat. Hist., VII, 1884, p. 31, pl. 1, figs. 5, 5a.
- 43346. Rhombopora? asperula Ulrich. Cotypes and figured sections.

  Keokuk (Miss.). Nauvoo, Illinois; Keokuk, Iowa.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 656, pl. 70, figs. 9-9e.
- 43344. Rhombopora attenuata Ulrich. Cotypes.
  Keokuk (Miss.). Warsaw, Illinois.
  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 655, pl. 70, fig. 7.
- 43714. Rhombopora crassa Ulrich. Holotype and figured sections. Upper Coal Measures. Kansas City, Missouri.

  Ulrich, Journ. Cincinnati Soc. Nat. Hist., VII, 1884, p. 28, pl. 1, figs. 2-2b.
- 44104. Rhombopora decipiens Ulrich. Cotype and figured sections. St. Louis (Miss.). Monroe County, Illinois.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 657, pl. 71, figs. 3b-3d.
- 43716. Rhombopora elegantula Ulrich. Cotypes and figured sections.

  Keokuk (Miss). Kings Mountain, Kentucky.

  Ulrich, Journ. Cincinnati Soc. Nat. Hist., VII, 1884, p. 33, pl. 1, figs. 3-3b.
- 44103. Rhombopora gracilis Ulrich. Cotypes.
  Burlington (Miss.). Burlington, Iowa.
  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 651, pl. 70, figs. 11a, 11b.
- 43345. Rhombopora incrassata Ulrich. Cotypes and figured sections.

  Keokuk (Miss.). Kings Mountain, Kentucky.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 652, pl. 70, figs. 12-12d.
- 43715. Rhombopora lepidodendroidea Meek. Plesiotypes and figured sections.

  Upper Coal Measures. Kansas City, Missouri.

  Ulrich, Journ. Cincinnati Soc. Nat. Hist., VII, 1884, p. 27, pl. 1, figs. 1-1b.
- 24532. Rhombopora lepidodendroides Meek. Cotypes.
  Upper Carboniferous. Nebraska City, Nebraska.

  Meek, Final Rept. U. S. Geol. Surv. Nebr. (Hayden), 1872, p. 141,
  pl. 7, figs. 2a-2c, 2f, 2g.

- 43343. Rhombopora lineinodis Ulrich. Cotypes.
  Onondaga (Dev.). Falls of the Ohio.
  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 649, pl. 45, figs. 3-3b.
- 43342. Rhombopora lineinodis humilis Ulrich. Cotypes.
  Onondaga (Dev.). Falls of the Ohio.
  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 650, pl. 45, figs. 4, 4a.
- 43336. Rhombopora minor Ulrich. Cotypes. Chester (Miss.). Sloans Valley, Kentucky.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 659, pl. 70, figs. 4, 4a.
- 43338. Rhombopora nicklesi Ulrich. Cotypes.
  Lower Coal Measures. Sparta, Illinois.
  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 661, pl. 70, figs. 1–1c.
- 43480. Rhombopora ohioensis Ulrich. Cotypes. Upper Waverly (Miss.). Richfield, Ohio.

  Ulrich, Bull. Denison Univ., IV, 1888, p. 90, pl. 14, figs. 15, 15a.
- 43712. Rhombopora persimilis Ulrich. Cotypes and figured sections. Chester (Miss.). Sloans Valley, Kentucky.

  Ulrich, Journ. Cincinnati Soc. Nat. Hist., VII, 1884, p. 30, pl. 1, figs. 7a, 7b.
- 43340. Rhombopora persimilis Ulrich? Plesiotype. Chester (Miss.). Chester, Illinois.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 659, pl. 70, fig. 3.
- 43711. Rhombopora pulchella Ulrich. Holotype. Kaskaskia (Miss.). Tateville (Sloans Valley), Kentucky.

  Ulrich, Journ. Cincinnati Soc. Nat. Hist., VII, 1884, p. 31, pl. 1, figs. 6, 6a.
- 44105. Rhombopora simulatrix Ulrich. Cotypes and figured sections. St. Louis (Miss.). Columbia, Monroe County, Illinois. Ulrich, Geol. Surv. Ill., VIII, 1890, p. 657, pl. 71, figs. 2-2b, 2d, 2e.
- 43337. Rhombopora? spiralis Ulrich. Cotypes and figured sections. Keokuk (Miss.). Kings Mountain, Kentucky.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 656, pl. 71, figs. 5-5d.

  =Streblotrypa spiralis.
- 44102. Rhombopora subannulata Ulrich. Cotypes and figured sections.

  Middle Devonian. Buffalo, Iowa.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 648, pl. 45, figs. 1–1i.
- 43341. Rhombopora sulcifera Ulrich. Cotypes and figured sections.
  Middle Devonian. Davenport, Iowa.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 649, pl. 45, figs. 2, 2b.

43793. Rnombopora tabulata Ulrich. Cotype and figured sections. Chester (Miss.). Kaskaskia, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 658, pl. 70, figs. 2a-2c.

43339. Rhombopora tenuirama Ulrich.

Cotypes.

Chester (Miss.). Chester, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 660, pl. 70, figs. 8-8b.

43717. Rhombopora wortheni Ulrich. Cotype and figured section. Chester (Miss.). Somerset, Kentucky.

> Ulrich, Journ. Cincinnati Soc. Nat. Hist., VII, 1884, p. 32, pl. 1, figs. 4, 4a, 4b.

43116. Rhopalonaria attenuata Ulrich and Bassler. Cotypes. Rochester (Sil.). Lockport, New York.

> Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLV, 1904, p. 268, pl. 66, figs. 4, 5.

43122. Rhopalonaria keokukensis Ulrich and Bassler. Holotype. Keokuk (Miss.). Keokuk, Iowa.

> Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLV, 1904, p. 272, pl. 66, fig. 11.

43120. Rhopalonaria medialis Ulrich and Bassler. Holotype. Hamilton (Dev.). Thedford, Ontario, Canada.

> Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLV, 1904, p. 270, pl. 66, fig. 10.

43259. Rhopalonaria pertenuis Ulrich.

Holotype.

Black River (Ord.). St. Paul, Minnesota.

Ulrich, Fourteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn., 1886, p. 59.

=Stomatopora delicatula.

35089. Rhopalonaria robusta Ulrich and Bassler. Holotype. Camden (Lower Dev.). Camden, Tennessee.

> Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLV, 1904, p. 269, pl. 66, fig. 6.

43118. Rhopalonaria tenuis Ulrich and Bassler. Holotype and 43119. paratypes.

Hamilton (Dev.). Thedford, Ontario, Canada; Alpena, Michigan.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLV, 1904, p. 270, pl. 66, figs. 7-9.

43113. Rhopalonaria venosa Ulrich. Holotype and plesiotype. 43115.

Richmond (Ord.). Waynesville and Clarksville, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 26, pl. 7, figs. 24, 24a.—Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLV, 1904, p. 268, pl. 66, figs. 2, 3.

Rhynchonella sp. undet. Meek and Hayden=Rhynchonella gnathophora.

8549. Rhynchonella argenturbica White. Cotypes. Richmond (Ord.). Silver City, New Mexico.

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 8 vo., 1874, p. 14; Rept. U. S. Geogr. Surv. W. 100th Merid., IV Pt. I, 1877, p. 75. pl. 4, figs. 12a-12e.

=Rhynchotreta inæquivalvis.

4816. Rhynchonella barrandei Hall. Plastotype
Oriskany (Lower Dev.), Albany County, New York.

Hall, Nat. Hist. New York, Pal. III, 1859, p. 442, pl. 103, fig. 4.

5890. Rhynchonella castanea Meek
Base of Upper Devonian. Lockhart River, Mackenzie
River Basin, Canada.

Meek, Trans. Chicago Acad. Sci., I, 1868, p. 93, pl. 13, figs. 9a-c.

13854. Rhynchonella castanea Meek. Plesiotype. Upper Devonian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 153, pl. 15, figs. 1, 1a, 4, 4a.

=Hypothyris castanea.

=Hypothyris castanea.

13851. Rhynchonella duplicata (Hall). Plesiotype.
Upper Devonian. Eureka District, Nevada.
Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 155, pl. 14, fig. 8.
—Camartœchia duplicata.

14023. Rhynchonella emmonsi Hall and Whitfield. Cotypes.
Upper Devonian. Treasure Hill, White Pine District,

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 247, pl. 3, figs. 4-8.

=Hypothyris emmonsi.

7798. Rhynchonella endlichi Meek. Cotypes.
1444° Upper Devonian. East of Animas River, Colorado.

Meek, Bull. No. 1, U. S. Geol. Surv., Terr. 1875, p. 46.—White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., 1880, p. 133, pl. 33, figs. 4a, 4b; pl. 36, figs. 2a, 2b.

=Camarotœchia (Plethorhyncha) endlichi.

14343. Rhynchonella eurekensis Walcott. Cotype. Lower Carboniferous. Eureka District, Nevada.

> Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 223, pl. 18, figs. 8–8c.

319. Rhynchonella gnathophora Meek? Plesiotypes. 12550. Jurassic. Flaming Gorge, Uinta Range, Utah.

Meek and Hayden, Pal. Upp. Missouri, Smithsonian Contr. to Knowl., No. 172, XIV, 1864, p. 71, pl. 3, fig. 4 (as Rhynchonella sp. undet.).—Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 284, pl. 7, fig. 6. 8853. Rhynchonella gnathophora Meek.
28954. Jurassic. Northwestern Colorado and Yellowston National Park.

Stanton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 69, pl. 72, figs. 1-4.

109298. Rhynchonella holmesii Dall.

Eocene. City quarry, Wilmington, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p 1536, pl. 58, figs. 10, 11, 12.

Cotypes.

13852. Rhynchonella horsfordi Hall. Plesiotyp. Middle Devonian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 152, pl. 14, fg.; pl. 15, fig. 6.

=Camarotœchia horsfordi.

34634. Rhynchonella (?) litchfieldensis Schuchert. Holotype. Cobleskill (Sil.). Wheelock's farm, Litchfield, Herkimer County, New York.

Schuchert, Amer. Geol., XXXI, 1903, p. 167, text-figures.

8516. Rhynchonella metallica White. Cotypes
Upper Carboniferous. Old Potosi mine, Lincoln County
Nevada.

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 8 vi-1874, p. 20; Rept. U. S. Geogr. Surv. W. 100th Merid., 3. Pt. I, 1877, p. 129, pl. 10, figs. 108-10d.

=Rhynchonella (Uncinulus?) metallica.

20131. Rhynchonella myrina Hall and Whitfield. Cotype-Jurassic. Flaming Gorge, Uinta Range, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II 1877, p. 284, pl. 7, figs. 1-5.

12280. Rhynchonella myrina Hall and Whitfield. Plesiotype 12306. Jurassic. Red Canyon Creek, Black Hills, South Dakota Whitfield, Rept. Geol. and Resources Black Hills Dakota, 189 p. 347, pl. 3, figs. 6, 7.

13853. Rhynchonella (Leiorhynchus) nevadensis Walcott.

Upper Devonian. Rescue Hill, Eureka District, Nevala Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 157, pl. 14, 5, 9-9b.

=Liorhynchus nevadense.

13855. Rhynchonella? occidens Walcott.

Middle Devonian. Combs Peak, Eureka District, Neval.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 152, pl. 15. fc.
3-3b.

6625. Rhynchonella osagensis (Swallow). Plesiotypes.
Upper Carboniferous. Rock Bluff, Missouri River, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Nebr. (Hayden), 1872, p. 179, pl. 1, figs. 9a-b.

= Pugnax utah.

9301. Rhynchonella ottumwa White.

Plesiotypes.

St. Louis (Miss.). Ottumwa, Iowa.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 165, pl. 41, figs. 5a-c.

=Pugnax ottumwa.

13857. Rhynchonella pugnus Martin.

Plesiotype.

Upper Devonian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 155, pl. 14, figs. 7, 7a.

=Pugnax pugnus.

14235. Rhynchonella pustulosa White?

Plesiotype.

Waverly (Miss.). Logan Canyon, Wahsatch Range, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 257, pl. 4, figs. 12-14.

=Rhynchopora pustulosa.

8479. Rhynchonella rockymontana (Marcou).

Plesiotype.

Upper Carboniferous. Near Beckwith Spring, Cedar Range, Utah.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 131, pl. 9, figs. 1a-1d.

= Pugnax rockymontana.

100203. Rhynchonella salpinx Dall.

Holotype.

Eocene. City quarry, Wilmington, North Carolina.

Dall, Trans. Wagner Free Inst. Sci., Phila., III., Pt. VI, 1903, p. 1535, pl. 58, figs. 5, 6, 7.

23017. Rhynchonella schucherti Stanton.

Cotypes.

Knoxville (Lower Cret.). Three miles northwest of Paskenta, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 31, pl. 1, figs. 1-4.

13856. Rhynchonella (Leiorhynchus) sinuatus (Hall).

Plesiotype.

Upper Devonian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 158, pl. 14, fig. 5. = Liorhynchus sinuatum.

14344. Rhynchonella thera Walcott. Cotypes. Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 223, pl. 7, figs. 6-6c.

=Camarophoria thera.

8513. Rhynchonella utah Marcou. Plesiotypes. Upper Carboniferous. Exact locality unknown.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. 1, 1876, p. 128, pl. 9, figs. 2a-2c.

=Pugnax utah.

8509. Rhynchonella wahsatchensis White. Holotype.
Upper Carboniferous. Rock Canyon, Wahsatch Range,
near Provo, Utah.

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 8 vo., 1874, p. 19; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1877, p. 130, pl. 9, figs. 3a-3d.

=Seminula wasatchensis.

23018. Rhynchonella whitneyi (Gabb). Plesiotypes.
Knoxville (Lower Cret.). Sulphur Creek, Colusa County,
California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895, p. 32, pl. 1, figs. 5-10.

35399. Rhynchotrema increbescens Hall. Plesiotypes.
Trenton (Ord.). Lexington, Kentucky.

Hayes and Ulrich, U. S. Geol. Surv., Folio 95, 1903, illustration sheet, figs. 38, 39.

25552. Rhyssomatus tabescens Scudder. Plesiotype.
Older Tertiary. Roan Mountains, western Colorado.
Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 123, pl. 11, fig. 9.

46298. Rhytimya byrnesi (Miller). Plesiotype. Richmond (Ord.). Richmond, Indiana.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 689, pl. 56, figs. 4, 5.

46299. Rhytimya compressa Ulrich. Holotype.
Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 692, pl. 56, fig. 13.

46300. Rhytimya convexa Ulrich. Holotype. Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 691, pl. 56, figs. 2, 3.

46301. Rhytimya mickleboroughi (Whitfield). Plesiotype. Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 690, pl. 56, figs. 14, 15.

46302. Rhytimya oehana Ulrich. Holotype.
Lorraine (Ord.). Cincinnati, Ohio.
Ulrich, Geol. Surv. Ohio, VII, 1893, p. 689, pl. 56, fig. 1.

46303. Rhytimya producta Ulrich.

Cotypes.

46304. Lorraine (Ord.). Mount Sterling, Kentucky; Cincinnati, Ohio.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 688, pl. 56, figs. 6-9.

46305. Rhytimya radiata Ulrich.

Cotypes.

Utica (Ord.). Covington, Kentucky.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 692, pl. 56, figs. 10-12.

46306. Rhytimya sinuata Ulrich.

Holotype.

Trenton (Ord.). Near Wykoff, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 619, pl. 36, figs. 46, 47.

8159. Rhytophorus meekii White.

Cotypes.

Bear River (Cret.). Sulphur Creek, Bear River Valley, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 82, pl. 30, figs. 8a, 8b; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 444, pl. 8, figs. 4, 5; Bull. No. 128, U. S. Geol. Surv., 1895, p. 43, pl. 5, figs. 6, 7.

500. Rhytophorus priscus Meek.

Holotype.

Bear River (Cret.). Bear River, near mouth of Sulphur Creek, Wyoming.

Meek, Rept. Expl. Great Basin of Utah, Simpson, 1876, p. 364, pl. 5, figs, 4a, b.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 444, pl. 8, figs. 2, 3; Bull. No. 128, U. S. Geol. Surv., 1895, p. 43, pl. 5, figs. 4, 5.

See Melampus priscus.

20114. Rimella macilenta White.

Cotypes.

Tejon (Eocene). Near New Idria, Fresno County, California.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 19, pl. 3, figs. 10-12.

112222. Rimella smithii Dall.

Holotype.

Oligocene. Ocala, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 172, pl. 10, figs. 4, 6.

113865. Ringicula chipolana Dall.

Holotype.

Chipola (Oligocene). Alum Bluff, Chattahoochee River, Florida.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 25; Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 58, fig. 9.

97465. Ringicula floridana Dall.

Plesiotypes.

Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 14, pl. 3, fig. 8.

97466. Ringicula (floridana var.?) guppyi Dall. Plesiotype
Pliocene. Caloosahatchie River, near Fort Thompso
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 1 pl. 3, fig. 7.

Cotype

113111. Ringicula semilimata Dall.
Chipola (Oligocene). Calhoun County, Florida.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 24; Trans. Wagn Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 60, fig. 24.

Pliocene. Shell Creek, De Soto County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 34 pl. 20, fig. 13b.

113574. Rissoa (Onoba) callistrophia Dall. Cotype
Pliocene. Caloosahatchie River, near Fort Thompse
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892. p. y. pl. 21, fig. 14a.

113572. Rissoa (Onoba) geræa Dall. Cotype Miocene. Cape Fear River, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p.2 pl. 21, fig. 13a.

Pliocene. Caloosahatchie River, near Fort Thomps: Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, F.

113569. Rissoa lipeus Dall.

Pliocene. Caloosahatchie River, near Fort Thomps:
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, ppl. 20, fig. 8b.

Pliocene. Caloosahatchie River, near Fort Thomps.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892.; pl. 20, fig. 8a.

Upper Oligocene. Pointapier, Trinidad, West Indis.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 321, pl. 29, fix

Oligocene. Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci., Phila., III, Pt. II, 1892.

113577. Rissoina johnsoni Dall. Holotype.

Miocene. Cape Fear River, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 342, pl. 20, fig. 1.

155766. Rochefortia planulata (Stimpson). Plesiotype.
Pliocene. Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1161, pl. 45, fig. 7.

115102. Rochefortia stantoni Dall. Holotype.

Miocene. Natural Well, Duplin County, North Carolina.

Dall, Trans. Wagner Free Inst. Sci., Phila., III, Pt. V, 1900, p. 1160, pl. 43, fig. 11.

115103. Rochefortia stimpsoni Dall. Holotype.

Miocene. Natural Well, Duplin County, North Carolina.

Dall, Trans. Wagner Free Inst. Sci., Phila., III, Pt. V, 1900, p. 1160, pl. 45, fig. 5.

275. Rostellaria biangulata Meek and Hayden. Holotype and paratype.

Montana (Cret.). Yellowstone River, near Miles City, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci., Phila., VIII, 1856, p. 65.

Aporrhais biangulata.

9875. Rostellaria? collina Conrad. Cotypes.
Cretaceous. Between Rio San Pedro and Rio Puercos,
Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 157, pl. 13, figs. 3a, 3b.

9870. Rostellaria? texana Conrad. Holotype.
Cretaceous. Between Rio San Pedro and Rio Puercos,
Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 158, pl. 13, figs. 4a, 4b.

22927. Rostellites ambigua Stanton. Cotypes.

22929. Colorado (Cret.). Huerfano Park, Colorado.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 156, pl. 33, figs. 8-10.

22928. Rostellites dalli Stanton. Cotypes.

Colorado (Cret.). Huerfano Park, Colorado.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 156, pl. 33, figs. 11-13.

22930. Rostellites gracilis Stanton. Cotypes.

Colorado (Cret.). Huerfano Park, Colorado.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 157, pl. 34, figs. 1-3.

9886. Rostellites texana Conrad.

Cotype.

Cretaceous. Eagle Pass, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 185. p. 158, pl. 14, figs. 2a, 2b.

8929. Rotella verruculifera White. Cotype. Upper Carboniferous. Near Taos, New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., III, Suppl. 1881, p. 32, pl. 4, figs. 7a-7d.

46570. Saccospongia danvillensis Ulrich. Cotype.
Trenton (Ord.). Danville, Kentucky.
Ulrich, Amer. Geol., III, 1889, p. 243.

46571. Saccospongia rudis Ulrich.

Cotypes.

Trenton (Ord.). Lexington, Kentucky.

Ulrich, Amer. Geol., III, 1889, p. 236, fig. 7; p. 242.

46307. Saffordia modesta (Ulrich). Holotype.
Trenton (Ord.). Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II. 1894, p. 627, pl. 41, figs. 29-31.

See Cypricardites? modestum.

46308. Saffordia sulcodorsata (Ulrich). Holotype. Richmond (Ord.). Spring Valley, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II 1894, p. 626, pl. 41, figs. 32, 33.

See Cuneamya sulcodorsata.

46309. Saffordia ventralis Ulrich. Cotypes.
46310. Richmond (Ord.). Spring Valley, Minnesota; Iron Ridge.
Wisconsin.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II. 1894, p. 626, pl. 41, figs. 34-41.

8329. Salenia texana Credner. Plesiotype
Washita (Lower Cret.). Cileola, Comanche Spring, Texas.
Clark, Bull. No. 97, U.S. Geol. Surv., 1893, p. 40, pl. 10, figs. 1a-1

45980. Salpingostoma buelli (Whitfield). Plesiotype. Stones River (Ord.). Beloit, Wisconsin.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept. III, Pt. II, 1897, p. 900, pl. 67, fig. 37.

45981. Salpingostoma buelli kentuckyensis Ulrich. Cotype. Black River (Ord.). Mercer County, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., 111, Pt. II. 1897, p. 901.

45982. Salpingostoma imbricata Ulrich and Scofield. Holotype Richmond (Ord.). Spring Valley, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept. III, Pt. II, 1897, p. 902, pl. 82, figs. 21, 22,

45983. Salpingostoma richmondensis Ulrich. Holotype. Richmond (Ord.). Richmond, Indiana.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 903, pl. 67, figs. 39, 40.

45984. Salpingostoma sculptilis Ulrich and Scofield. Cotype.
Trenton (Ord.). Goodhue County, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 902, pl. 82, fig. 16.

15375. Salterella pulchella Billings. Plesiotype. Lower Cambrian. East of Swanton, Vermont.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 144, pl. 13, fig. 3; pl. 12, figs. 7-7c; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 625, pl. 79, figs. 5, 5b-5e.

14901. Salterella rugosa Billings. Plesiotype.

Lower Cambrian. L'Anse au Loup, Labrador.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 145, pl. 13, fig. 2; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 625, pl. 79, fig. 4.

20096. Sanguinolaria? caudata White. Cotypes. Puget (Cret.). Carbonado, Washington.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 61, pl. 10, figs. 1-3.

107105. Sanguinolaria unioides Guppy. Holotype. Tertiary. Savana Grande, Trinidad, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 327, pl. 30, fig. 11.

14389. Sanguinolites æolus Hall. Plesiotype.

14390. Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 247, pl. 20, figs. 6, 7, 9.

=Sphenotus æolus.

13903. Sanguinolites? combensis Walcott. Holotype.
Middle Devonian. Combs Peak, Eureka District, Nevada.
Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 175, pl. 15, fig. 16.

13904. Sanguinolites? gracilis Walcott. Cotype.
Middle Devonian. Eureka District, Nevada.
Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 175, pl. 4, fig. 10.

14391. Sanguinolites? nænia Walcott. Holotype. Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 249, pl. 19, fig. 9.

7733. Sanguinolites (Promacrus) nasutus Meek. Holotype. Chouteau (Miss.). Chouteau Springs, Cooper County, Missouri.

Meek, Amer. Journ. Conch., VII, 1871, p. 6, pl. 1, fig. 1.

- 14392. Sanguinolites retusus Walcott.

  Lower Carboniferous. Eureka District, Nevada.

  Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 247, pl. 20, fig. 1
- Upper Devonian. The Gate, near Eureka, Nevada.

  Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 176, pl 16, fg.:

  = Sphenotus contractus.
- 14393. Sanguinolites salteri Walcott. Holotype Lower Carboniferous. Eureka District, Nevada. Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 248, pl. 20, fig. ::
- Middle Devonian. Atrypa Peak, Eureka District, Nevada Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 176, pl. 5, fg. 4
- Lower Carboniferous. Eureka District, Nevada.

  Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 248, pl. 20, fig.::
- 14395. Sanguinolites striatus Walcott.

  Lower Carboniferous. Eureka District, Nevada.

  Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 249, pl. 23, fg.

  = Cypricardella striata.
- 13905. Sanguinolites ventricosus (White and Whitfield).

  Plesiotype
  Upper Devonian. Rescue Hill, Eureka District, Nevaluation Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 177, pl. 15, fig. 5
- Post-Pliocene. San Pedro, California.

  Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Occ.
  V, 1856, p. 324, pl. 3, figs. 25, 25a.
- 111585. Saxicava bilineata Conrad. Plesioty:
  111612. Miocene. Jericho, New Jersey.
  Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 92, pl. 16gs. 1-3.
- Jurassic. Redwater Valley, Black Hills, South Dakot.

  Whitfield, Rept. Geol. and Resources Black Hills Dakota. P. 376, pl. 5, figs. 25-30.
- 164871. Saxidomus popofianus Dall. Holowa Miocene. Popof Island, Shumagins, Alaska.

  Dall, Harriman Alaska Exped., IV, 1904, p. 115, pl. 10, fig.

112190. Scala (Opalia) debouryi Dall. Holotype. Oligocene. Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 244, pl. 20, fig. 13.

130038. Scala ranellina Dall. Cotypes.
Jacksonian (Eocene). Cocoa, Choctaw County, Alabama.
Dall, The Nautilus, IX, No. 10, 1896, p. 111.

106904. Scala (Sthenorytis) stearnsii Dall. Holotype. Pliocene. San Diego, California.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 245, pl. 21, fig. 4.

115864. Scala virginiana Clark.

Holotype.

Eocene. Aquia Creek, Virginia.

Clark, Johns Hopkins Univ. Circ. No. 15, 1895, p. 4; Bull. No. 141, U. S. Geol. Surv., 1896, p. 71, pl. 14, figs. 3a, 3b.

263. Scalaria cerethiformis Meek and Hayden. Holotype. Fox Hills (Cret.). Moreau, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 63.

= Chemnitzia cerithiformis.

7991. Scalaria hemphillii Dall.

Cotypes.

Pliocene. San Diego, California.

Dall, Proc. U. S. Nat. Mus., I, 1878, p. 16.

115437. Scalaria leroyi Guppy. Holotype. Oligocene. Jamaica, British West Indies.

Guppy, Geol. Mag., London, Dec. II, I, 1874, p. 406, pl. 16, fig. 10; pl. 18, fig. 2.

111647. Scalaria multistriata Say. Plesiotype. Miocene. Jericho, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 126, pl. 23, fig. 5.

8920. Scalaria unilineata Heilprin. Holotype. Eocene. Jackson, Mississippi.

Heilprin, Proc. U. S. Nat. Mus., III, 1880, p. 150, fig. 5.

26544. Scalaripora canadensis Whiteaves. Cotypes. Hamilton (Dev.). Thedford, Ontario, Canada. .

Whiteaves, Cont. to Canadian Pal., I, Pt. V, 1898, p. 378, pl. 48, figs. 10a, 10b.

45985. Scalites angulatus Emmons. Plesiotype. Chazy (Ord.). Chazy, New York.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 933, fig. 4.

135060. Scapharca (Bathyarca) spenceri Dall. Hokeya Pliocene. Tehuantepec, Panama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898. ps. pl. 32, figs. 16, 24.

149025. Scapharca (Scapharca) staminata Dall. Hologa.
Oligocene. Alum Bluff, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 1 pl. 31, figs. 11, 13.

- Oligocene. Potrero, Rio Amino, Santo Domingo.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898. p. u. pl. 33, figs. 7, 8.
- 107722. Scapharca (Scapharca) triphera Dall. Holoty.
  Pliocene. Caloosahatchie River, near Fort Thompse.
  Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p & pl. 33, fig. 6.

Oligocene. Vicksburg, Mississippi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p.7 pl. 7, fig. 3.

Pliocene. Caloosahatchie River, near Fort Thomps: Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890. Fx pl. 7, fig. 8.

- Eocene. Prairie Creek, Wilcox County, Alabama.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. p. pl. 6, fig. 9.
  - 6088. Scaphella (Aurinia) obtusa (Emmons). Plesiotyre Miocene. Locality in North Carolina not known.

    Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890. p. pl. 7, fig. 7.

Scaphella podagrina Dall. See Caricella podagrina.

111814. Scaphella (Caricella) subangulata (Conrad). Plesiotye Upper Eocene. Garland Creek, Mississippi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890. p. pl. 6, fig. 11.

111832. Scaphella trenholmii (Tuomey and Holmes). Plesioty:
Oligocene. Alum Bluff, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, P. pl. 6, fig. 10.

6927. Scaphiocrinus? hemisphericus (Shumard). Plesiotypes.
Upper Carboniferous. Bennetts Mill, near Nebraska City,
Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Nebr. (Hayden), 1872, p. 147, pl. 5, figs. 1a, 1b.

= Delocrinus hemisphericus.

409. Scaphites abyssinus (Morton). Plesiotypes. Fox Hills (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 441, pl. 35, figs. 2a, 2b.

386. Scaphites cheyennensis (Owen). Plesiotypes.

402. Fox Hills (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 437, pl. 35, figs. 3a-e; 3f-i of the Aptychus.

See Ammonites moreauensis.

398. Scaphites conradi (Morton). Plesiotypes.

400. Fox Hills (Cret.). Long Lake, North Dakota, and Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 430, pl. 36, figs. 2a-f.

See Ammonites nebrascensis.

399. Scaphites conradi gulosus (Morton). Plesiotypes. Fox Hills (Cret.). Near Fox Hills, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 432, pl. 36, fig. 1.

408. Scaphites conradi intermedius Meek. Holotype. Fox Hills (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 433, pl. 34, figs. 3a-c.

229. Scaphites larvæformis Meek and Hayden. Holotype. Fort Benton (Cret.). East base of Black Hills, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1858, p. 58.— Meek, Ninth Ann. Rept. U. S. Geol. Surv. Terr., 1876, p. 418, pl. 6, figs. 6a-c.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 182, pl. 44, fig. 2.

410. Scaphites mandanensis (Morton). Plesiotypes. Fox Hills (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 443, pl. 35, figs. 1a-c.

See Ammonites? mandanensis.

1924. Scaphites mullananus (Meek and Hayden). Holotype. Colorado (Cret.). Chippewa Point, upper Missouri River.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 187, pl. 45, figs. 2-4.

See Ammonites mullananus.

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- 405. Scaphites nicolletii (Morton). Plesiotypes.
- 407. Fox Hills (Cret.). Moreau River and Cheyenne River, near Black Hills, South Dakota.
  - Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 435, pl. 34, figs. 2a-b, 4a-c.
- Fort Pierre (Cret.). Cheyenne River, near Rapid Creek,
  Black Hills, South Dakota.
  - Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 441, pl. 13, fig. 12.
  - 367. Scaphites nodosus brevis Meek. Holotype.
    Fort Pierre (Cret.). Yellowstone River, near Miles City,
    Montana.
    - Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 426, pl. 25, figs. 1a-c.
- 12289. Scaphites nodosus brevis Meek. Plesiotypes. Fort Pierre (Cret.). Cheyenne River, near Rapid Creek, Black Hills, South Dakota.
  - Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 443, pl. 13, figs. 8, 9.
  - 364. Scaphites nodosus plenus Meek and Hayden. Holotype. Fort Pierre (Cret.). Yellowstone River, near Miles City, Montana.
    - Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1860, p. 177.— Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 429, pl. 26, figs. 1a-c.
  - 365. Scaphites nodosus quadrangularis Meek. Holotype and paratypes.
  - 370. Fort Pierre (Cret.). Yellowstone River, near Miles City,
    Montana, and Cheyenne River, South Dakota.
    - Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 428, pl. 25, figs. 2a-c.
- 12291. Scaphites nodosus quadrangularis Meek. Plesiotypes.
  Fort Pierre (Cret.). Cheyenne River, near Rapid Creek,
  Black Hills, South Dakota.
  - Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 443, pl. 13, figs. 10, 11.
  - 1903. Scaphites ventricosus Meek and Hayden. Cotypes. 1904. Fort Benton (Cret.). Chippewa Point, near Fort Benton, Montana.
    - Meek and Hayden, Proc. Acad. Nat. Sci. Phila. for 1862, p. 22.— Meek, Ninth Ann. Rept. U. S. Geol. Surv. Terr., 1876, p. 425, pl. 6, figs. Sa-Sc.
- 1903. Scaphites ventricosus Meek and Hayden. Cotypes and plesiotypes.
- 18817. Colorado (Cret.). Chippewa Point, near Fort Benton, and Cinnabar Mountain, Montana.
  - Stanton, Bull. No. 106, U S. Geol. Surv., 1893, p. 186, pl. 44, figs. 8-10; pl. 45, fig. 1.

1902. Scaphites vermiformis Meek and Hayden. Holotype. Fort Benton (Cret.). Chippewa Point, near Fort Benton, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1862, p. 22.— Meek, Ninth Ann. Rept. U. S. Geol. Surv. Terr., 1876, p. 423, pl. 6, figs. 4a, 4b.

225. Scaphites warreni Meek and Hayden. Holotype.
Fort Benton (Cret.). Southern base of Black Hills, South
Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1860, p. 177.— Meek, Rept. U. S. Geol. Surv., IX, 1876, p. 420, pl. 6, fig. 5. See Scaphites wyomingensis.

8636. Scaphites warreni Meek and Hayden. Plesiotype.
Colorado (Cret.). Three miles southwest of San Mateo,
New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 200, pl. 19, fig. 3a.

12262. Scaphites warreni Meek and Hayden. Plesiotypes.
12290. Colorado (Cret.). East fork Beaver Creek, Black Hills,
South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 444, pl. 13, figs. 1-4.

225. Scaphites warreni Meek and Hayden. Holotype and plesiotypes.

12262. Colorado (Cret.). Black Hills, South Dakota.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 185, pl. 44, figs. 4-7. See Scaphites wyomingensis.

12258. Scaphites wyomingensis (Meek and Hayden). Plesiotypes. Fort Benton (Cret.). Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 446, pl. 13, figs. 5-7.

=Scaphites warreni.

45986. Scenella affinis Ulrich and Scofield. Holotype. Black River (Ord.). Goodhue County, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 840, pl. 61, figs. 36, 37.

45987. Scenella affinis obsoleta Ulrich and Scofield. Cotypes. Trenton (Ord.). Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 841.

46532. Scenella beloitensis Ulrich and Scofield. Plastotype. Stones River (Ord.). Beloit, Wisconsin.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, p. 839, pl. 61, figs. 33, 34.

45988. Scenella compressa Ulrich and Scofield. Holotyr Stones River (Ord.). Minneapolis, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Fa. Rept., III, Pt. II, 1897, p. 840, pl. 61, figs. 38-41.

15367. Scenella? conula Walcott.

Cotype

Lower Cambrian. Prospect Mountain, Eureka Distra Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 15, pl. 9, fg: Bull. No. 30, U. S. Geol. Surv., 1886, p. 127, pl. 8, figs. 64 Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 616, pl.; figs. 4, 4a.

45989. Scenella magnifica Ulrich and Scofield. Plastotyp. Stones River (Ord.). Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Fix Rept., III, Pt. II, 1897, p. 839, pl. 82, figs. 7-9.

45990. Scenella radialis Ulrich and Scofield. Plastoty.

Trenton (Ord.). St. Paul, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Fm Rept., III, Pt. II, 1897, p. 841, pl. 61, figs. 31, 32.

15368. Scenella reticulata Billings. Plesiotype 18323. Lower Cambrian. Topsail Head, Conception Bay, Norfoundland.

Walcott, Bull. No. 30, U.S. Geol. Surv., 1886, p. 125, pl. 125, 6, 6a; Tenth Ann. Rept. U.S. Geol. Surv., 1890, p. 616, pl. figs. 9-9d.

15369. Scenella retusa Ford.

Plesiotype

Lower Cambrian. Troy, New York.

Walcott, Bull. No. 30, U.S. Geol. Surv., 1886, p. 126, pl. 12.2 3a; Tenth Ann. Rept. U.S. Geol. Surv., 1890, p. 617, pl. 1616, 6a.

45991. Scenella superba Billings. Plesiotype Stones River (Ord.). Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Fr. Rept., III, Pt. II, 1897, p. 838, pl. 61, fig. 35.

15370. Scenella? varians Walcott.

Lower Cambrian. Two miles east of Highgate Spring Vermont.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 127, pl. 12, fr 2, 2a; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 617, pl. figs. 5, 5a.

43289. Scenellopora radiata Ulrich. Holoty:

Trenton? (Ord.). Knoxville, Tennessee.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 158, p.

43478. Sceptropora facula Ulrich. Cotypes and figured section Richmond (Ord.). Stony Mountain, Manitoba.

Ulrich, Amer. Geol., I, 1888, p. 229, fig. 1.

43474. Sceptropora fustiformis Ulrich.

Cotypes.

Clinton (Sil.). Hamilton, Ontario.

Ulrich, Geol. Surv. Canada, Contr. Micro-Pal. Cambro-Sil., Pt. II, 1889, p. 46.

24556. Schizambon typicalis Walcott.

Cotype.

Upper Pogonip (Ord.). East of Hamburg mine, Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 70, pl. 1, figs. 3a-d.

115404. Schizaster antillarum Cotteau.

Holotype.

Eocene. St. Bartholomew, West Indies.

Cotteau, Kongl. Svenska Vet-Akad. Hand., XIII, 6, 1874, p. 28, pl. 5, figs. 3-5.

115408. Schizaster clevei Cotteau.

Holotype.

Miocene. Anguilla, West Indies.

Cotteau, Kongl. Svenska Vet-Akad. Hand., XIII, 6, 1874, p. 29, pl. 5, figs. 7, 8.

115391. Schizaster loveni Cotteau.

Cotypes.

Miocene. Anguilla, West Indies.

Cotteau, Kongl. Svenska Vet-Akad. Hand., XIII, 6, 1874, p. 29, pl. 5, figs. 9-13.

115416. Schizaster subcylindricus Cotteau.

Cotypes.

Eocene. St. Bartholomew, West Indies.

Cotteau, Kongl. Svenska Vet-Akad. Hand., XIII, 6, 1874, p. 31, pl. 5, figs. 14-17.

35247. Schizodus affinis Herrick.

Plesiotypes.

35248. Upper Coal Measures. Near Lehigh and McAlester quadrangle, Indian Territory.

Girty, 19th Ann. Rept. U. S. Geol. Surv., 1900, p. 582, pl. 72, figs. 4a-4f.

14401. Schizodus cuneatus Meek.

Plesiotype.

Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 252, pl. 20, fig. 8.

35312. Schizodus cuneatus Meek?

Plesiotype.

Rico (Upper Carb.). Scotch Creek, Rico quadrangle, Colorado.

Girty, U. S. Geol. Surv., Prof. Pap. No. 16, 1903, p. 439, pl. 9, fig. 10.

14404. Schizodus curtiforme Walcott.

Cotype.

Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 253, pl. 22, figs. 3, 3a.

6496. Schizodus curtus Meek and Worthen? Plesiotype.
Upper Carboniferous. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv., Nebraska (Hayden), 1872, p. 208, pl. 10, figs. 3a-3g.

14402. Schizodus deparcus Walcott. Holotype. Lower Carboniferous. Eureka District, Nevada. Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 252, pl. 22, fg. 5

46367. Schizodus magnus Worthen. Plastotype Chester (Miss.). Randolph County, Illinois.

Worthen, Bull. No. 2, Ill. State Mus. Nat. Hist., 1884, p. 9.

35251. Schizodus meekanus Girty. Cotyps.
35252. Upper Coal Measures. Boggy Creek, McAlester quadrangle, and Atoka quadrangle, Indian Territory.

Girty, Nineteenth Ann. Rept. U. S. Geol. Surv., 1900, p. 583 pl. 72, figs. 72–7c.

13921. Schizodus (Cytherodon) orbicularis Walcott. Cotype. Middle Devonian. Lone Mountain, near Eureka, Nevada Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 181, pl. 5. is 8, 8a.

3960. Schizodus ovatus Meek and Hayden. Holotype Permian. Cottonwood Creek, Kansas.

Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Know No. 172, XIV, 1864, p. 59, pl. 2, figs. 11a, 11b.

See Axinus (Schizodus) ovatus.

35250. Schizodus pandatus Girty. Holotyk Upper Coal Measures. Boggy Creek, McAlester quarangle, Indian Territory. Girty, Nincteenth Ann. Rept. U. S. Geol. Surv., 1900, p. 583.5 72, fig. 5a.

14403. Schizodus pintoënsis Walcott. Cotyp.
Lower Carboniferous. Near Pinto Peak, Eureka District.
Nevada.
Walcott, Mon. VIII, U.S. Geol. Surv., 1884, p. 253, pl. 22, figs. 2.2

35246. Schizodus subcircularis Herrick. Plesiotys
Upper Coal Measures. McAlester quadrangle, India
Territory.

Girty, Nineteenth Ann. Rept. U. S. Geol. Surv., 1900, p. 52,772, fig. 8a.

35249. Schizodus telliniformis Girty. Holotype Upper Coal Measures. Boggy Creek, McAlester quantum rangle, Indian Territory.

Girty, Nineteenth Ann. Rept. U. S. Geol. Surv., 1900, p. 551-72, fig. 6a.

8503. Schizodus wheeleri (Swallow). Plesiotype Upper Carboniferous. Near Bear Spring, Camp Wingst New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. L. v. p. 154, pl. 11, figs. 6a, 6b.

45992. Schizolopha moorei Ulrich.

45993-

Cotypes.

Richmond (Ord.). Richmond, Indiana.

Lorraine (Ord.). Covington, Kentucky (Cincinnati, Ohio, in error).

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 992, pl. 65, figs. 31-37.

45992. Schizolopha textilis Ulrich.

Holotype.

Trenton (Ord.). Nashville, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 992, pl. 65, fig. 30.

1845. Schizothærus nuttalli Conrad.

Cotypes.

Post-Pliocene. San Pedro, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, V, 1856, p. 324, pl. 4, figs. 33, 33a.

=Tresus nuttallii.

41296. Schmidtella affinis Ulrich.

Cotypes.

Trenton (Ord.). Near Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 641, pl. 43, figs. 45-47.

41299. Schmidtella brevis Ulrich.

Holotype.

Trenton (Ord.). Fountain, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 642, pl. 45, figs. 34, 35.

41295. Schmidtella crassimarginata Ulrich.

Holotype.

Stones River (Ord.). Mineral Point, Wisconsin.

Ulrich, Amer. Geol., X, 1892, p. 269, pl. 9, figs. 27-30; Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 640, pl. 43, figs. 42-44.

41298. Schmidtella incompta Ulrich.

Cotypes.

Trenton (Ord.). Fountain, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 642, pl. 45, figs. 27, 32, 33.

41297. Schmidtella incompta subæqualis Ulrich. Holotype. Trenton (Ord.). Near Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, pl. 43, figs. 39-41.

41300. Schmidtella subrotunda Ulrich.

Cotypes.

Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 643, pl. 45, figs. 39-42.

41301. Schmidtella umbonata Ulrich.

Cotypes.

Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 641, pl. 45, figs. 36-38.

- 594 BULLETIN 53, UNITED STATES NATIONAL MUSEUM.
- 25661. Schroederoceras casiensis (Whitfield). Plesiotypes.
  Beekmantown (Ord.). Fort Cassin, Vermont.

  Hyatt, Proc. Amer. Phil. Soc., XXXII, 1894, p. 473, pl. 7, figs. 4-6.
- 25660. Schroederoceras eatoni (Whitfield). Plesiotypes. Beekmantown (Ord.). Fort Cassin, Vermont.

  Hvatt, Proc. Amer. Phil. Soc. XXXII, 1894, p. 470, pl. 6, figs. 31-34; pl. 7, figs. 7, 8.
- 27206. Schuchertites grahami Smith. Holotype.
  Upper Coal Measures. Graham, Young County, Texas.
  Smith, Mon. XLII, U. S. Geol. Surv., 1903, p. 50, pl. 21, figs.
- 25555. Sciabregma rugosa Scudder. Holotype.
  Older Tertiary. Roan Mountains, western Colorado.
  Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 147, pl. 12, fig. 8.
- 25597. Sciomyza? manca Scudder. Cotype.
  25712. Older Tertiary. Green River, Wyoming.
  Scudder, Thirteenth Ann. Rept. U. S. Geol. Surv. Terr., 1890, p. 543, pl. 4, fig. 9.
- 20123. Scobinella dilleri White. Cotypes.
  Chico (Cret.). Eighteen miles east of Redding, California.
  White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 25, pl. 4, figs. 1-3.
- 13966. Scoliostoma americana Walcott. Cotypes. Middle Devonian. Atrypa Peak, Eureka District, Nevada. Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 195, pl. 6, figs. 1-1e.
- 13334. Scutella striatula Conrad. Plesiotype.
  Miocene. California.

  Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean,
  VII, 1857, pl. 9, figs. 1a, 1b.
- 25521. Scythropus? abacus Scudder. Holotype.
  Older Tertiary. White River, western Colorado.
  Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 60, pl. 9, fig. 15.
- 25520. Scythropus somniculosus Scudder. Holotype. Older Tertiary. Roan Mountains, western Colorado.

  Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 60, pl. 9, fig. 18.
- 25517. Scythropus subterraneus Scudder. Cotypes.
  Older Tertiary. White River, Colorado and Utah.
  Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 59, pl. 9, fig. 14.
  Sedgwickia. See also Allorisma (Sedgwickia).

1021. **Sedgwickia? altirostrata** (Meek and Hayden). Holotype. Upper Carboniferous. Juniata, Kansas.

Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Knowl. No. 172, XIV, 1864, p. 41, pl. 1, fig. 9.

See Allorisma? altirostrata.

1023. Sedgwickia concava Meek and Hayden. Cotypes. Upper Carboniferous. Region of Nemaha, Nebraska.

Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Knowl. No. 172, XIV, 1864, p. 41, pl. 1, figs. 8a, 8b.

See Lyonsia (Panopæa) concava.

- 15229. Sedgwickia? concava Meek and Hayden. Plesiotypes.
  Permian or Triassic. Southeast of Salt Lake City, Utah.
  Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II,
  1877, p. 276, pl. 6, fig. 3.
- 46760. Sedgwickia (Sanguinolites) subarcuata Meek and Worthen.
  Plastotype.
  Keokuk (Miss.). Warsaw, Illinois.

Meek and Worthen, Geol. Surv. Ill., III, 1868, p. 537, pl. 19, fig. 3b.

- O11. Sedgwickia topekaensis (Shumard)? Plesiotypes.
  Upper Carboniferous. Leavenworth, Kansas.

  Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Knowl.
  No. 172, XIV, 1864, p. 40, text figs. A, B.
- 21701. Sedgwickia topekaensis (Shumard). Plesiotype. Permian. Godwin Creek, Baylor County, Texas.

  White, Bull. No. 77, U. S. Geol. Surv., 1891, p. 26, pl. 4, fig. 11.
- 28136. Seelya difficilis Whitfield? Plesiotypes.
  Beekmantown (Ord.). Fort Cassin, Vermont.

  Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1009, figs. 7c, 7d.
- 45995. Seelya mundula Ulrich. Cotypes.

  Lorraine (Ord.). Newport, Kentucky.

  Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1012, pl. 70, figs. 11, 12.
- 28187. Seelya (?) (Plethospira?) ulrichi Schuchert. Cotypes.
  Trenton (Ord.). Head of Frobisher Bay, Baffin Land.
  Schuchert, Proc. U. S. Nat. Mus., XXII, 1900, p. 166, pl. 12, figs.
  9, 10.
- 45996. Seelya ventricosa Ulrich. Holotype. Beekmantown (Ord.). Fort Cassin, Vermont.

  Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1009, fig. 5.

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- Oligocene. Alum Bluff, Calhoun County, Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 22
- Oligocene. Alum Bluff, Calhoun County, Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V. 194.
  p. 989, pl. 43, fig. 4.
- 115057. Semele bella appressa Dall. Cotype.
  115059. Miocene. Duplin County, North Carolina.
  155788. Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 9
- 155789. Semele bella bella (Conrad). Plesiotya Miocene. Magnolia, Duplin County, North Carolina. Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. m.
- Miocene. Duplin County, North Carolina.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 9
- Oligocene, Miocene, and Pliocene. Oak Grove, Santa Ros County, Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. or pl. 36, figs. 23, 26.
- Chipola (Upper Oligocene). Alum Bluff, Calhoun Count Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V. 1904: 986, pl. 37, fig. 3.
- Chipola (Upper Oligocene). Chipola River, Calbot County, Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p.9-pl. 44, fig. 5.
- 155790. Semele leana Dall.

  Pliocene. Caloosahatchie River, Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 190., 190., 192., pl. 37, figs. 1, 2.
- Oligocene. Calhoun County, Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. pl. 43, fig. 12.
- 155782. Semele mutica scintillata Dall.
  Oligocene. Calhoun County, Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V. 1988, pl. 43, fig. 2.

114656. Semele mutica stearnsii Dall. Holotype.

Oligocene. Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 988, pl. 43, fig. 16.

135900. Semele nuculoidea striulata Dall. Cotypes.
Oligocene. Oak Grove, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 994.

155791. Semele perlamellosa Heilprin. Plesiotypes.
Pliocene. Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 992, pl. 37, figs. 4, 5.

162526. Semele pulchra montereyi Arnold. Plesiotype.
Pleistocene. Deadman Island, off San Pedro, California.

Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 166, pl. 15, figs. 4, 4a.

114657. Semele smithii Dall. Holotype.
Oligocene. McClellan's Farm, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p.
987, pl. 43, fig. 6.

4788. Semele stimpsoni Dall.

Holotype.

Miocene. Penjinsk Gulf, Siberia.

Dall, Proc. U. S. Nat. Mus., XVI, 1893, p. 473, pl. 56, fig. 5.

43330. Semicoscinium planodorsatum Ulrich. Holotype.
Onondaga (Dev.). Falls of the Ohio River.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 555, pl. 44, figs. 3–3b.

=Semicoscinium permarginatum.

43329. Semicoscinium rhombicum Ulrich. Cotypes and figured sections.

Middle Devonian. Buffalo, Iowa.

figs. 5a-5d.

Ulrich, Geol. Surv. III., VIII, 1890, p. 556, pl. 44, figs. 4–4a; pl. 54, fig. 8.

35194. Seminula humilis Girty. Cotypes.

Madison (Miss.). Crowfoot Ridge, Gallatin Range, Yellowstone National Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 565, pl. 71, figs. 6a-6c.

35195. Seminula immatura Girty. Cotypes. Madison (Miss.). West of Antler Peak, Gallatin Range,

Yellowstone National Park. Girty, Mon. XXXII, Pt. II, U. S. Geol, Surv., 1899, p. 566, pl. 71,

35191. Seminula madisonensis Girty. Cotypes.

Madison (Miss.). Conant Creek, Teton Range, Yellowstone National Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 563, pl. 71, figs. 2a, 2b, 2c.

35192. Seminula madisonensis pusilia Girty. Holotype and paratype.

Madison (Miss.). North of Little Sunlight Creek, Yellowstone National Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 564, pl.74.

figs. 3a, 3b.

figs. 1-10.

- 35332. Seminula subquadrata Hall? Plesiotype. Leadville (Miss.). Leadville District, Colorado.

  Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 296, pl. 1, fig. 5
- 35193. Seminula subtilita (Hall). Plesiotype.
  Upper Carboniferous. Near Weston, on Missouri River.
  Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 564, pl. 7:
  figs. 4a-4c.
- Seminula subtilita (Hall). Plesiotypes
  to
  35338. Hermosa and Rico (Upper Carb.). Bear Creek, Hermosa
  Creek, Cliff South of Carson Creek, and Animas River.
  Durango quadrangle; Scotch Creek and Sandstow Mountain, Rico quadrangle, Colorado.
  Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 403, pl. Vii.
- 12549. Septocardia carditoidea Hall and Whitfield. Holotyp.
  Jurassic. Shoshone Springs, Augusta Mountains, Nevada
  Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV. R
  II, 1877, p. 296, pl. 7, fig. 25.
- 12538. Septocardia typica Hall and Whitfield. Cotype Jurassic. Shoshone Springs, Augusta Mountains, Nevada Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I. 1877, p. 295, pl. 7, figs. 26, 27.
- 43313. Septopora biserialis Swallow. Figured section of plesiotype Upper Coal Measures. Kansas City, Missouri.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 631, pl. 56, fig. 11.
- 44092. Septopora cestriensis Prout.

  Chester (Miss.). Chester, Illinois.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 628, pl. 64, figs. 1-1d.
- 43312. Septopora decipiens Ulrich. Cotype Chester (Miss.). Sloans Valley, Pulaski County, Ke tucky.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 630, pl. 66, fig. 9.
- 43794. Septopora robusta Ulrich. Figured sections of cotyle Upper Coal Measures. Fayette County, Illinois.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 633, pl. 56, figs. 9-90.

43300. **Septopora robusta intermedia Ulrich**. Cotypes and figured section.

Chester (Miss.). Sloans Valley, and near Litchfield, Kentucky.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 634, pl. 56, fig. 10; pl. 64, figs. 4-4a.

43795. **Septopora subquadrans** Ulrich. Cotypes and figured section.

Chester (Miss.). Sloans Valley, Kentucky, and Chester, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 629, pl. 56, figs. 7, 8; pl. 64, figs. 2, 2b.

113435. Serpula mendica Dall.

Cotypes.

Pliocene. Caloosahatchie, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 306.

226. Serpula? tenuicarinata Meek and Hayden. Cotypes.
Fort Benton (Cret.). Mouth of Vermilion River, South
Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1857, p. 134.— Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 507, pl. 6, fig. 1.—Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 53, pl. 1, fig. 2.

112579. Serpulorbis (granifera var. ?) ballistæ Dall. Holotype. Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 304, pl. 22, fig. 21.

112274. Serpulorbis granifera tenera Dall. Holotype.

Miocene. Duplin County, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 303.

27203. Shumardites simondsi Smith. Paratype. Upper Coal Measures. Graham, Young County, Texas. Smith, Mon. XLII, U. S. Geol. Surv., 1903, p. 135, pl. 3, figs. 3-10.

158317. Siderastrea hexagonalis Vaughan. Holotype. Midwayan (Eocene). Prairie Creek, Alabama.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 155, pl. 18, figs. 1-4.

Oligocene. Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 379, pl. 17, fig. 7.

112970. Sigaretus multiplicatus Dall. Holotype.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 379, pl. 20, figs. 12, 12b.

Sigaretus scopulosus Conrad. Cotvoe 3553. Miocene. Astoria, Oregon. Conrad, Wilkes U. S. Expl. Exped., X, 1849, p. 727, Atlas, pl :: 22914. Sigaretus (Euaticina?) textilis Stanton. Cotype Colorado (Cret.). Upper Kanab Valley, Utah. Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 139, pl.; figs. 5, 6. 22894. Siliqua huerfanensis Stanton. Cotype Colorado (Cret.). Huerfano Park, Colorado. Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 114, pl. 25.55 10, 11. 156887. Siliqua (patula var.?) oregonia Dall. Miocene. Two Mile Creek, near Coos Bay, Oregon. Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. & 157839. Siphonalia? lineata Stanton. Cotype Lower Tejon (Eocene). One mile north of Pacheco, 236 one mile southeast of Lower Lake, California. Stanton, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. I. iv p. 1047, pl. 67, fig. 7. 4791. Siphonaria penjinæ Dall. Cotype Miocene. Penjinsk Gulf, Siberia. Dall, Proc. U. S. Nat. Mus., XVI, 1893, p. 475, pl. 56, fig. 2. 4754. Siphonotreta? curta Dana. Carboniferous. Glendon on the Hunter, New Sout Wales, Australia. Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 685, Atlas, p. figs. 5, 5a, 5b. [A pelecypod.] 115421. Sismondia anguillæ Cotteau. Holotyp Miocene. Anguilla, West Indies. Cotteau, Kongl. Svenska Vet.-Akad. Hand., XIII, 6, 1874. P.: pl. 3, figs. 5-8. 115394. Sismondia antillarum Cotteau. Cotype Eccene. St. Bartholomew, West Indies. Cotteau, Kongl. Svenska Vet.-Akad. Hand., XIII, 6, 1874, p. . pl. 3, figs. 1-4. 25524. Sitona paginarum Scudder. Cotype Older Tertiary. Roan Mountains, western Colorado. Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 68, pl. 10, fis

Middle Devonian. Lone Mountain, near Eureka, Neval Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 116, pl. 13.7.

Holoty:

13827. Skenidium devonicum Walcott.

4, 4a.

= Dalmanella devonica.

14561. Smithia hennahii (Lonsdale). Plesiotypes.
Upper Devonian. Babylon Hill, White Pine District,
Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 32, pl. 2, figs. 6, 6a.

1169. Smithia verrilli Meek.

Cotypes.

Base of Upper Devonian. Anderson River, Mackenzie River Basin, Canada.

Meek, Trans. Chicago Acad. Sci., I, 1868, p. 83, pl. 11, figs. 7-7b. = Phillipsastræa verrilli.

113509. Solariaxis alabamense Dall.

Holotype.

Eocene. Matthews Landing, Alabama.

Dall. Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 324, pl. 22, fig. 17.

113511. Solariaxis aldrichi Dall.

Cotypes.

Eocene Wahtubbee Hills, east of Enterprise, Mississippi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 325, pl. 22, figs. 13, 13a.

113507. Solariaxis cossmanni Dall.

Holotype.

Claibornian (Eocene). Claiborne, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, It. II, 1892, p. 324, pl. 22, figs. 14, 14a.

113512. Solariaxis leanum Dall.

Holotype.

Eocene. Wahtubbee Hills, east of Enterprise, Mississippi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 325, pl. 22, fig. 12.

113510. Solariaxis periscelidum Dall.

Holotype.

Eocene. Matthews Landing, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 325, pl. 22, fig. 11.

107125. Solariella altiuscula Guppy.

Holotype.

Oligocene. Vendryes, Jamaica, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 324, pl. 27, fig. 17.

113078. Solariella louisiana Dall.

Holotype.

Eocene. Near Enterprise, Mississippi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 407, pl. 23, fig. 1.

113081. Solariella turritella Dall.

Holotype

Oligocene. Near Baileys Ferry, Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 408, pl. 23, fig. 2.

107075. Solariorbis clypeatus Guppy.

Holotype.

Oligocene. Vendryes, Jamaica, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 323, pl. 27, fig. 3.

Miocene. Greensboro, Caroline County, Maryland.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 33.
pl. 22, figs. 16, 16a.

113532. Solarium bellastriatum newtonense Dall. Holotype Eocene. Newton, Mississippi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 27

6200. Solarium bellastriatum vicksburgensis Dall. Cotype.
Oligocene. Vicksburg, Mississippi.
Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 32

Oligocene. Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 3x

pl. 22, figs. 4, 4a.

Claibornian (Eocene). Claiborne, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 32.
pl. 22, figs. 15, 15a.

Pliocene. Trinidad, British West Indies.

Guppy, Geol. Mag., London, Dec. II, I, 1874, p. 408, pl. 18, fig. 4

113538. Solarium textilinum Dall. Holotys
Eocene. Wahtubbee Hills, Clarke County, Mississippi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 32
pl. 22, figs. 1-3.

13412. Solarium wallalense White. Holotype. Chico (Cret.). Wallala, California.

White, Bull. No. 22, U. S. Geol. Surv., 1885, p. 14, pl. 5, figs. 1.2

155776. Solecardia (Spaniorinus) cossmanni Dall. Cotype-Miocene. Petersburg, Virginia.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 136 pl. 45, figs. 27, 27a.

23060. Solecurtus? dubius Stanton.

Knoxville (Lower Cret.). Near Stephenson, Teham.
County, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p.:
pl. 10, figs. 4, 5.

3654. Solecurtus? ellipticus Dana.

Carboniferous. Wollongong Point, Illawarra, New Sour Wales, Australia.

Dana William U. S. Evpl. Exped. V. 1840, p. 696, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 686, Atlas, pl. fig. 9.

3631. Solecurtus (Psammobia?) planulatus Dana. Holotype. Carboniferous. Harpers Hill on the Hunter, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 686, Atlas, pl. 2, fig. 10.

8913. Solemya bilix White. Holotype.

Montana (Cret.). Four miles north of Golden, Colorado.

White. Proc. U. S. Nat. Mus., III, 1880, p. 158; ibid., IV, 1881.

White, Proc. U. S. Nat. Mus., III, 1880, p 158; ibid., IV, 1881, p. 139, fig. 9.

22874. Solemya? obscura Stanton. Holotype. Colorado (Cret.). Poison Canyon, Huerfano Park, Colo-

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 95, pl. 21, fig. 8.

23051. Solemya occidentalis Stanton. Cotypes.

Knoxville (Lower Cret.). Three miles northwest of Paskenta, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 55, pl. 10, figs. 2, 3.

459. Solemya subplicata (Meek and Hayden). Holotype. Fox. Hills (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 129, pl. 28, fig. 19.

See Solen subplicatus.

3486. Solemya ventricosa Conrad.

rado.

Holotype.

3567. Miocene. Astoria, Oregon.

Conrad, Wilkes U. S. Expl. Exped., X, 1849, p. 723, Atlas, pl. 17, figs. 7, 8.

135901. Solen amphistemma Dall.

Holotype.

Oligocene. Oak Grove, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 952, pl. 39, fig. 8.

154270. Solen conradi Dall. Plesiotype.

Oligocene or Miocene. Astoria, Oregon.

Dall, Trans. Wagner Free Inst. Sci. Phila, III, Pt. V, 1900, p. 953.

184. Solen? dakotaensis Meek and Hayden. Holotype.

Dakota (Cret.). Just below mouth of Vermilion River,
South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1857, p. 142.

=Pharella dakotaensis.

140118. Solen (Plectosolen) lisbonensis abruptus Dall. Cotypes. Claibornian (Eocene). Clarke County, Mississippi.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 953.

- Upper Eocene or Miocene. Coos Bay, Oregon.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, P & See Donax? protexta.
  - 449. Solen subplicatus Meek and Hayden. Holotye
    Fox Hills (Cret.). Moreau River, South Dakota.

    Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. v.

    = Solemya subplicata.
  - 8922. Soleniscus brevis White.

    Upper Carboniferous. Coyote Creek, and near Taos, Not Mexico.

    White, Rept. U. S. Geogr. Surv. W. 100th Merid., III, Suppl. 1881, p. 28, pl. 4, figs. 5a-5c.
  - 8923. Soleniscus planus White.

    Upper Carboniferous. Coyote Creek, New Mexico.

    White, Rept. U. S. Geogr. Surv. W. 100th Merid., III. Supi. 1881, p. 29, pl. 4, figs. 4a-4c.
- 9142. Soleniscus? (Macrocheilus) ponderosus Swallow?

   Plesiotype
  Upper Carboniferous. Vermilion County, Illinois.

  White, Proc. U. S. Nat. Mus., VI, 1883, p. 187, pl. 8, figs 1:
  Thirteenth Ann. Rept. Geol. Surv. Ind., 1884, p. 156, pl 2
  figs. 1, 2.
- 9372. Soleniscus (Macrocheilus) ventricosus Hall. Plesiotye 12210. Upper Carboniferous. Springfield and Danville, Illine White, Proc. U. S. Nat. Mus., VI, 1883, p. 187, pl. 8, fig.: Thirteenth Ann. Rept. Geol. Surv. Ind., 1884, p. 155, pl. 5 figs. 11, 12.
- 14380. Solenomya curta Walcott.

  Lower Carboniferous. Eureka District, Nevada.

  Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 242, pl. 22, fs. 6, 11.
- 47412. Solenomya varsoviensis Worthen. Plastotyp Keokuk (Miss.). Warsaw, Ilinois. Worthen, Geol. Surv. Ill., VIII, 1890, p. 131, pl. 19, fig. 8.
- 18337. Solenopleura bombifrons Matthew. Plesioty:
  Lower Cambrian. Conception Bay, Newfoundland.
  Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 656, pl. 5
  figs. 5, 5a.
- 18338. Solenopleura? harveyi Walcott.

  Lower Cambrian. Conception Bay, Newfoundland.

  Walcott, Proc. U. S. Nat. Mus., XII, 1889, p. 45; Tenth American Rept. U. S. Geol. Surv., 1890, p. 656, pl. 97, figs. 7, 7a.

18336. Solenopleura? howleyi Walcott. Cotype. Lower Cambrian. Conception Bay, Newfoundland.

Walcott, Proc. U. S. Nat. Mus., XII, 1889, p. 45; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 657, pl. 97, figs. 8, 8a.

15425. Solenopleura nana Ford. Plesiotype.

17451. Lower Cambrian. Troy, and Washington County, New York.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 214, pl. 27, fig. 3; Amer. Journ. Sci. (3), XXXIV, 1887, p. 196, pl. 1, fig. 1-1d; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 658, pl. 98, figs. 1-1e, 2.

17452. Solenopleura? tumida Walcott. Holotype.

Lower Cambrian. Washington County, New York.

Walcott, Amer. Journ. Sci. (3), XXXIV, 1887, p. 196, pl. 1, figs. 2, 2a; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 658, pl. 98, figs. 3, 3a.

35236. Solenopleura? weedi Walcott. Holotype and paratype. Flathead (Middle Cambrian). Crowfoot section, Gallatin Range, Yellowstone National Park.

Walcott, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 464, pl. 65, figs. 9, 9a.

6488. Solenopsis solenoides (Geinitz). Plesiotypes. Upper Carboniferous. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Nebr. (Hayden), 1872, p. 223, pl. 10, fig. 3.

45997. Solenospira pagoda (Salter). Plesiotypes. Black River (Ord.). Goodhue County, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1022, pl. 70, figs. 56, 57.

46072. Solenospira prisca (Billings). Plesiotypes.

46073. Stones River (Ord.). Beloit and Janesville, Wisconsin.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, 1897, p. 1022, pl. 70, figs. 53, 55.

46074. Solenospira prisca extenuata Ulrich. Holotype. Stones River (Ord.). Murfreesboro, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1022, pl. 70, fig. 52.

112050. Solenosteira inornata Dall. Cotypes.

Oligocene. Banks of Hillsboro River, near Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 123; Pt. II, 1892, p. 234, pl. 20, fig. 17.

Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 122, pl. 9, fig. 1.

109266. Solenosteira vaughani Dall. Holotyk

Miocene. Coes Mill Run, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI. :9: pl. 60, fig. 18.

43254. Spatiopora aspera Ulrich. Cotypes and figured section Lorraine (Ord.). Hamilton, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI 1883, p. 166, 2; 5, 5a, 5b.

43253. Spatiopora iowensis Ulrich.

Cotyx

Utica (Ord.). Graf, Iowa.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. 1893, p. 321.

43255. Spatiopora labeculosa Ulrich. Holotype and figured section Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III.? I, 1893, p. 320, pl. 28, figs. 1, 2.

43252. Spatiopora lineata Ulrich.

Holotype

Lorraine (Ord.). Hamilton, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 167, p. 169, 7.

43257. Spatiopora maculosa Ulrich.

Holoty

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 167, p. 169, 6.

43299. Spatiopora maculosa incepta Ulrich.

Cotype

Black River (Ord.). Chatfield, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, P. 1893, p. 320.

=Spatiopora lineata incepta.

43256. Spatiopora montifera Ulrich. Holotype and figured section Richmond (Ord.). Waynesville, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 168, pl. figs. 1, 1a; pl. 7, fig. 8.

12511. Sphæra whitneyi Meek.

Cotype

12524. Upper Triassic. Buena Vista Canyon, West Humbo. Range, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 11 pl. 10, 4, a-c.

457. Sphæriola? cordata (Meek and Hayden). Holotyre Fox Hills (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 137, pl. 3 figs. 3a-c.

See Cyprina cordata.

12385. Sphæriola? endotrachys Meek. Holotype.
Fox Hills (Cret.). Ninety miles below Fort Benton,
Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 139, pl. 29, fig. 2.

7835. Sphæriola obliqua Meek.

Holotype.

Fox Hills (Cret.). Lefthand Creek, between Long Mountain and Boulder City, Colorado.

Meek, Bull. U. S. Geol. and Geogr. Surv. Terr. (2), I, 1875, p. 46.

12316. Sphæriola transversa Whitfield. Cotypes. Fox Hills (Cret.). Cheyenne River, near Old Woman Fork, Black Hills, Wyoming.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 415, pl. 10, figs. 14-16.

458. Sphæriola? warrenana Meek.

Holotype.

Fox Hills (Cret.). Near eastern base of Black Hills, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 138.

2125. Sphærium formosum (Meek and Hayden). Paratypes.

Laramie (Cret.). Ten miles below Fort Union, North
Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 526. See Cyclas formosa and C. fragilis.

20063. Sphærium formosum (Meek and Hayden). Plesiotype. Eocene. Wales, Utah.

White, Bull. No. 34, U. S. Geol. Surv., 1886, p. 21, pl. 4, figs. 5, 6.

12520. Sphærium? idahoense Meek. Cotypes. Miocene. Fossil Hill, Kawsoh Mountains, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 183, pl. 16, figs. 1, a.

2130. Sphærium planum Meek and Hayden. Holotype.

Laramie (Cret.). Near Grand Island, Upper Missouri
River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., 1860, p. 175.— Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 526, pl. 43, figs. 6a, 6b.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 439, pl. 17, fig. 8.

2129. Sphærium recticardinale Meek and Hayden. Holotype and paratypes.

Laramie (Cret.). Near Grand Island, Missouri River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., 1860, p. 176.— Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 527, pl. 43, figs. 3a, 3b.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 439, pl. 27, fig. 9. 12521. Sphærium rugosum Meek. Cotypes.
Miocene. Fossil Hill, Kawsoh Mountains, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 182, pl. 16, figs. 2, a, b.

2128. Sphærium subellipticum (Meek and Hayden). Holotype.
Fort Union (Cret.). Ten miles below Fort Union, North
Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 527, pl. 43, figs. 5a, 5b.

See Cyclas subellipticus.

35059. Sphærocystites bloomfieldensis Schuchert. Cotypes.
Manlius (Sil.). Clark's Mill, near New Bloomfield, Pennsylvania.

Schuchert, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 251.

35053. Sphærocystites globularis Schuchert. Holotype.
35077. Manlius (Sil.). Near Keyser, West Virginia, and Devil's Backbone, near Cumberland, Maryland.

Schuchert, Amer. Geol., XXXII, 1903, p. 233; Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 252, text figs. 40, 41; pl. 38, figs. 3-5; pl. 39, figs. 5, 6.

35054. Sphærocystites globularis ovalıs Schuchert. Holotype.
Manlius (Sil.). Near Keyser, West Virginia.

Schuchert, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 253, pl. 38, fig. 6.

35052. Sphærocystites multifasciatus Hall. Plesiotypes.
35058. Manlius (Sil.). Near Keyser, West Virginia, and Cash
Valley, near Cumberland, Maryland.

Schuchert, Smithsonian Misc. Coll., Quart., XI,VII, 1904, p. 250, text figs. 38, 39; pl. 38, figs. 1, 2; pl. 39, figs. 1-4.

26441. Sphærodictya subsphærica (Walcott). Plesiotype. Utica (Ord.). Near Holland Patent, New York.

Hall and Clarke, Mem. II, New York State Mus., 1898 (Oct., 1899), p. 26, pl. 1, figs. 14, 15.

See Teganium subsphæricum.

107806. Sphenia attenuata Dall.

Holotype.

Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci., Phila., III, Pt. IV, 1898, p. 86c, pl. 35, fig. 9.

114679. Spheniopsis americana Dall.

Cotypes.

Chipola (Oligocene). Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci., Phila., III, Pt. VI, 1903, p. 1508, pl. 57, figs. 28, 29.

29386. Sphenodiscus beecheri Hyatt. Paratype.
Ripley (Upper Cret.). Three miles northeast of Ripley,
Mississippi.

Hyatt, Mon. XLIV, U. S. Geol. Surv., 1903, p. 81.

7754. Sphenodiscus lenticularis (Owen). Plesiotype. Fox Hills (Upper Cret.). Moreau River, South Dakota.

Hyatt, Mon. XLIV, U. S. Geol. Surv., 1903, p. 71, pl. 8, figs. 1, 2.

20863c. Sphenodiscus lenticularis mississippiensis Hyatt.

Cotypes.

Ripley (Upper Cret.). Three miles northeast of Ripley, Mississippi.

Hyatt, Mon. XLIV, U. S. Geol. Surv., 1903, p. 77, pl. 9, figs. 7-9.

2403. Sphenodiscus lobatus (Tuomey). Plesiotypes.
20577. Ripley (Upper Cret.). Landers Mill, Tippah County, and
Pontotoc County, Mississippi.

Hyatt, Mon. XLIV, U. S. Geol. Surv., 1903, p. 66, pl. 6, figs. 1, 2; pl. 7, figs. 1, 2; pl. 9, fig. 13.

19145a. Sphenodiscus pleurisepta (Conrad). Plesiotypes. 19145b. Eagle Pass (Upper Cret.). Near Eagle Pass, Texas.

29384. Hyatt, Mon. XLIV, U. S. Geol. Surv., 1903, pp. 59-65, pl. 3, figs. 29385. 13, 14; pl. 4, figs. 1, 2; pl. 5, figs. 1, 2.

See Ammonites pleurisepta.

29386. Sphenodiscus stantoni Hyatt. Cotypes.

Eagle Pass (Upper Cret.). Near Eagle Pass, Texas.

Hyatt, Mon. XLIV, U. S. Geol. Surv., 1903, p. 70, pl. 5, fig. 4; pl. 6, fig. 5.

46311. Sphenolium striatum Ulrich. Holotype.
Trenton (Ord.). Thirteen miles south of Cannon Falls,
Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 624, pl. 36, figs. 44, 45.

158089. Sphenotrochus claibornensis Vaughan. Cotypes. Claibornian (Eocene). Claiborne, Alabama.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 85, pl. 6, figs. 1-3a (? pl. 5, fig. 22).

I 58083. Sphenotrochus nanus (Lea). Plesiotypes.
 I 58084. Claibornian (Eocene). Claiborne, Alabama.
 Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 80, pl. 5, figs. 21-24 (? fig. 22).

24336. Sphenotus gorceixi Clarke. Cotypes.

Middle Devonian. Ereré, Brazil.

Clarke, Archivos do Mus. Rio de Janeiro, X, 1899, p. 59, pl. 5, fig. 15.

43310. Sphragiopora parasitica Ulrich.

Cotypes

Chester (Miss.). Chester, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 638, pl. 65, figs. 6, 6a. Spirifer sp. undet. Meek=Spirifer perlamellosus.

7807. Spirifer agelaius Meek?

Lower Carboniferous. Old Baldy, near Virginia City

Montana.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 470, m footnote.—White, Twelfth Ann. Rept. U. S. Geol., Surv. Ter. Pt. I, 1883, p. 135, pl. 34, figs. 10, 10b.

[Listed as Spirifer triradialis Phillips, but changed to S. agelaius

14225. Spirifer albapinensis Hall and Whitfield. Cotype
Waverly (Miss.). Logan Canyon, Wahsatch Range
Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II 1877, p. 255, pl. 4, fig. 7.—Girty, Mon. XXXII, U. S. Geol Surv., Pt. II, 1899, p. 547, pl. 72, figs. 3c, 3d (as S. cenar natus var.).

- =Spirifer centronatus albapinensis.
- 12671. Spirifer (Spiriferina?) alia Hall and Whitfield. Holotype Triassic. South of Dun Glen Pass, Pah-Ute Range Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt I 1877, p. 281, pl. 6, fig. 17.

14320. Spirifer annectans Walcott.

Lower Carboniferous. Richmond Mountain, Eureka Ditrict, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 216, pl. 18, fp. 7, 7a.

13832. Spirifer (Trigonotreta) argentarius Meek. Cotype
Upper Devonian. Treasure Hill, White Pine District
Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 4 pl. 3, figs. 4-4b.

=Spirifer pinonensis.

17944. Spirifer attenuatus Sowerby? Plesiotyp Keokuk (Miss.). Keokuk Rapids of Mississippi Riv: Iowa.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, pl. 3A, fig Spirifer keokuk.

14979. Spirifer belphegor Clarke.

Holoty

Genesee (Dev.). Bristol, New York.

Clarke, Bull. No. 16, U. S. Geol. Surv., 1885, p. 30, pl. 3, fig.

35318. Spirifer boonensis Swallow?

Plesioty:
35319. Hermosa (Upper Carb.). Bear Creek and South Fork.

Hermosa Creek, Durango quadrangle, Colorado. Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 381, pl. 6 ½

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 381, pl. 6 f. 1-lb, 2, 22, 3.

6531. Spirifer cameratus Morton. Plesiotypes.

6985. Upper Carboniferous. Near and at Nebraska City, Nebraska.

> Meek, Final Rept. U.S. Geol. Surv., Neb. (Hayden), 1872, p. 183, pl. 6, fig. 12; pl. 8, fig. 15.

See Spirifer inæquicostatus and S. triplicata.

645. Spirifer cameratus Morton. Plesiotype.

Upper Carboniferous. Summit of Spring Pass, east of Eureka, Nevada.

Meek, Rept. Expl. Great Basin of Utah, Simpson, 1876, p. 353, pl. 2, fig. 3b.

See Spirifer (Trigonotreta) cameratus.

8502. Spirifer cameratus Morton. Plesiotypes. Upper Carboniferous. Santa Fé, New Mexico, and Mad-9164. ison County, Iowa.

> White, Rept. U.S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 132, pl. 10, figs. 1a-1d.

645. Spirifer (Trigonotreta) cameratus (Morton). Plesiotype. Upper Carboniferous. Summit of Spring Pass, east of Eureka, Nevada.

> Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 91, pl. 9, figs. 2, 2a.

=Spirifer cameratus.

17923. Spirifer cedarensis Owen.

Holotype.

Middle Devonian. Two and one-half miles below Rockingham, Iowa.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, pl. 3, fig. 5. =Spirifer iowensis.

14224. Spirifer centronata Winchell. Waverly (Miss.). Dry Canyon, Oquirrh Mts., Utah.

Plesiotypes.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 254, pl. 4, figs. 5, 6.—Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 547, pl. 70, fig. 3b.

See Spirifer albapinensis.

8532. Spirifer centronatus Winchell. Plesiotypes. Lower Carboniferous. Mountain Spring, Old Mormon

Road, Nevada. White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876,

p. 86, pl. 5, figs. 8a-8c.—Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 547, pl. 70, fig. 3a.

See Spirifer albapinensis.

35185. Spirifer centronatus semifurcatus Girty. Cotypes. Madison (Miss.). Crowfoot Ridge, Yellowstone National Park.

> Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 549, pl. 70, fig. 4a.

13840. Spirifer compactus Meek. Cotypes.

Base of Upper Devonian. Lockhart River, Mackenzie
River Basin, Canada.

Meek, Trans. Chicago Acad. Sci., I, 1868, p. 102, pl. 14, figs. 11a-h.

=Reticularia fimbriata.

33964. Spirifer coniculus Girty. Cotypes.
Ouray (Upper Dev.). Engineer Mountain, Colorado.
Girty, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 47,

pl. 5, figs. 1-4.

14230. Spirifer (Syringothyris) cuspidatus (Martin)? Plesiotype.

Lower Carboniferous. Treasure Hill, White Pine Mountains, Nevada.

Meek Rept II S Geol Evol 40th Par IV Pt I 1877 p. 87

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 87, pl. 3, figs. 11, 11a.

=Syringothyris carteri.

3634. Spirifer darwinii Morris.
4756. Carboniferous. Glendon on the Hunter, New South
Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 684, Atlas, pl. 1, figs. 7a, 7b.

14322. Spirifer desiderata Walcott. Holotype.

Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 217, pl. 7, fig. 8.

9587. Spirifer disjunctus animasensis Girty. Cotypes. 14450. Ouray (Upper Dev.). Many localities in the Ouray lime-33957. stone of central Colorado.

33963. Girty, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 48, pl. 4, figs. 1-10.

3595. Spirifer duodecicostatus M'Coy. Plesiotypes.
Carboniferous. District of Illawarra, New South Wales,
Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 684, Atlas, pl. 2, figs. 1a, 1b.

627. Spirifer englemanni Meek. Cotypes. 7748. Upper Devonian. Neills Valley, east of Eureka, Nevada.

Meek, Proc. Acad. Nat. Sci. Phila., 1860, p. 308; Rept. Expl. Great Basin of Utah, Simpson, 1876, p. 346, pl. 1, figs. 1-1c; Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 41, pl. 3, figs. 3-3c (3d-3f?).—Girty, Mon. XXXII, U. S. Geol. Surv., Pt. II, 1899, p. 504, pl. 66, figs. 3a, 3b, 3c, 3d.

17924. Spirifer euruteines (Owen). Cotypes.

Middle Devonian. Pine Creek, Iowa.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, p. 586, pl. 3, figs. 2, 2a, 6-6b.

See Delthyris euruteines.

8540. Spirifer (Syringothyris) extenuatus (Hall). Plesiotype. Lower Carboniferous. Mountain Spring, Old Mormon Road, Nevada.

> White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 88, pl. 5, figs. 9a-9d.

=Syringothyris extenuata.

14021. Spirifer (Martinia) franklinii Meek. Holotype.

Base of Upper Devonian. Forty miles below the Ramparts of Mackenzie River, Canada.

Meek, Trans. Chicago Acad. Sci., I, 1868, p. 107, pl. 14, figs. 12a-c.

=Reticularia franklinii.

3663. Spirifer glaber (Martin). Plesiotypes.

> Carboniferous. Black Head, Illawarra, and Harpers Hill, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 683, Atlas, pl. 1, figs. 6a-f.

8483. Spirifer (Martinia) glaber contractus Meek and Worthen. Plesiotypes.

> ' Upper Carboniferous. Camp Cottonwood, Lincoln County, Nevada.

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 1874, p. 20; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1877, p. 136, pl. 10, figs. 2a-c.

= Martinia glabra contracta.

13836. Spirifer (Martinia) glabra nevadensis Walcott. Cotype. Upper Devonian. Eureka District, Nevada.

> Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 139, pl. 3, fig. 5; pl. 14, figs. 14-14b.

= Reticularia nevadensis.

17954. Spirifer inequicostatus Owen.

Holotype.

Upper Carboniferous. ? Skunk River, Iowa.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, p. 586, pl. 5, fig. 6.

=Spirifer cameratus.

17925. Spirifer iowensis Owen.

Holotype.

Middle Devonian. Iowa River, Iowa.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, p. 585, pl. 3, fig. 1.

See Spirifer cedarensis, S. ligus, and S. pennatus.

5899. Spirifer kennicotti Meek.

Holotype. Base of Upper Devonian. Liards River, Mackenzie-River Basin, Canada.

Meek, Trans. Chicago Acad. Sci., I, 1868, p. 101, pl. 14, figs. 9a, 9b.

996. Spirifer (Martinia) planoconvexus (Shumard).

6503. Plesiotyps.
Upper Carboniferous. Manhattan, Kansas, and Nebraska
City, Nebraska.

Meek and Hayden, Pal. Upper Mo., Smithsonian Cont. to Knowl. No. 172, XIV, 1864, p. 21, text figs. a-e.— Meek, Final Rept U. S. Geol, Surv. Neb. (Hayden), 1872, p. 184, pl. 8, figs. 2a, 2b.

=Ambocœlia planoconvexa.

14980. Spirifer pluto Clarke.

Cotype.

Genesee (Dev.). Bristol, New York.

Clarke, Bull. No. 16, U. S. Geol. Surv., 1885, p. 31, pl. 3, fig. 12. See Liorhynchus? hecate.

649. Spirifer (Spiriferina) pulcher (Meek). Cotypes.

Upper Carboniferous. Long Valley and Ruby Valley, east of Eureka, Nevada.

Meek, Rept. Expl. Great Basin of Utah, Simpson, 1876, p. 352, pl. 2, figs. 1a-1h.

649. Spirifer pulchra Meek.

Cotypes

Upper Carboniferous. Long Valley and Ruby Valley. east of Eureka, Nevada.

Meek, Proc. Acad. Nat. Sci. Phila., 1860, p. 310.

=Spiriferina pulchra.

13829. Spirifer raricosta (Conrad).

Plesiotype

Middle Devonian. Eureka District, Nevada.

Walcott, Mon, VIII, U. S. Geol. Surv., 1884, p. 135, pl. 4, fig. 2, 2a; pl. 14, fig. 12.

=Spirifer (Delthyris) raricosta.

5897. Spirifer (Martinia) richardsoni Meek.

Holotype

Base of Upper Devonian. Fort Good Hope, Mackenzik River, Canada.

Meek, Trans. Chicago Acad. Sci., I, 1868, p. 104, pl. 14, figs. 2a-x. [A young specimen of S. compactus Meek.]

=Reticularia fimbriata.

8488. Spirifer rockymontanus Marcou.

Plesiotype

Upper Carboniferous. Near Santa Fé, New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV., Pt. I, 1875 p. 134, pl. 11, figs. 9a-9d.

35320 Spirifer rockymontanus Marcou. Plesiotype

to Hermosa and Weber (Upper Carb.). Empire Gulch and

35322. Horseshoe Mountain, Leadville District and Engine:
Mountain quadrangle, Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 383, pl. 6, fig. 4, 4a, 5, 5a, 6, 6a, 7, 7c.

644. Spirifer scobina Meek.

Cotypes.

Upper Carboniferous. Divide between Long Valley and Ruby Valley, east of Eureka, Nevada.

Meek, Proc. Acad. Nat. Sci. Phila., 1860, p. 310.

=Spiriferina scobina.

See Spirifer (Trigonotreta) scobina.

644. Spirifer (Spiriferina?) scobina (Meek). Cotypes.
Upper Carboniferous. Divide between Long Valley and
Ruby Valley, east of Eureka, Nevada.

Meek, Rept. Expl. Great Basin of Utah, Simpson, 1876, p. 351, pl. 2, figs. 5a-5c.

644. Spirifer (Trigonotreta) scobina (Meek). Cotypes.
Upper Carboniferous. Divide between Long Valley and
Ruby Valley, east of Eureka, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 90, pl. 9, figs. 1-1d.

=Spiriferina scobina.

14229. Spirifer setigera Hall.

Plesiotype.

Lower Carboniferous. North of Snowstorm Hill, Dry Canyon, Oquirrh Mountains, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV. Pt. II, 1877, p. 270, pl. 5, fig. 17.

= Reticularia setigera.

14223. Spirifer striata (Martin).

Plesiotypes.

Lower Carboniferous. Dry Canyon, Oquirrh Mountains, Utah.

Hall and Whitfield, Rept. U.S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 269, pl. 5, figs. 13-15.

8528. Spirifer striatus (Martin).

Plesiotypes.

Lower Carboniferous. Mountain Spring, Old Mormon Road, Nevada.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 88, pl. 5, fig. 10a.

35184. Spirifer striatus madisonensis Girty.

Cotypes.

Madison (Miss.). Crowfoot Ridge, Yellowstone National Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 551, pl. 70, figs. 2a-2d.

629. Spirifer strigosus Meek.

Cotypes.

Upper Devonian. Neils Valley, east of Eureka, Nevada.

Meek, Rept. Expl. Great Basin of Utah, Simpson, 1876, p. 347, pl. 1, figs. 5-5d.

See Spirifer macra and S. (Trigonotreta) strigosus.

629. Spirifer (Trigonotreta) strigosus (Meek). Cotypes. Upper Devonian. Neils Valley, east of Eureka, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 43, pl. 3, figs. 5-5b.

See Spirifer macra.

35203. Spirifer subattenuatus Hall. Plesiotypes.

Madison (Miss.). Stinkingwater Valley, Absaroka Range, Yellowstone National Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 550.

14323. Spirifer trigonalis (Martin). Plesiotype.

Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 215, pl. 18, fig. 11.

15063. Spirifer triplicata Hall. Cotypes.

Upper Carboniferous. Weston, Missouri.

Hall, Stansbury's Expl. and Surv. Valley, Great Salt Lake, Utah, 1852, p. 410, pl. 4, figs. 5a-5e.

=Spirifer camerata.

13839. Spirifer (Martinia) undifera (Roemer). Plesiotype.

13873. Middle Devonian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 143, pl. 3, figs. 3-3b, 6, 6a; pl. 14, figs. 11-11b.

=Reticularia fimbriata.

626. Spirifer utahensis Meek.

Cotypes.

Upper Devonian. White Pine District, Nevada.

Meek, Rept. Expl. Great Basin of Utah, Simpson, 1876, p. 345, pl. 1, figs. 4-4c; Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 39, pl. 3, figs. 1-1e.

See Spirifer norwoodi.

3596. Spirifer vespertilio Sowerby. Plesiotypes.
Carboniferous. Black Head, District of Illawarra, New
South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 685, Atlas, pl. 2, figs. 3a, 3b, 3c.

Spirifera. See Spirifer.

Spiriferina. See also Spirifer (Spiriferina).

14332. Spiriferina cristata (Schlotheim). Plesiotypes.

Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 218, pl. 18, figs. 5, 12, 13.

=Spirifer spinosa.

14459. Spiriferina gonionota Meek. Holotype.

Upper Carboniferous Railroad Canyon Diamond Moun-

Upper Carboniferous. Railroad Canyon, Diamond Mountains, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 84, pl. 8, figs. 5-5b (named at end of description).

8492. Spiriferina kentuckensis Shumard. Plesiotypes.
Upper Carboniferous. Near Santa Fe, New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 138, pl. 10, fig. 4c.

See Spirifer octoplicata.

35340. Spiriferina kentuckyensis Shumard. Plesiotype. Hermosa (Upper Carb.). Rico quadrangle, Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 400, pl. 6, fig. 11.

8501. Spiriferina octoplicata (Sowerby). Plesiotype.
Upper Carboniferous. Near Santa Fé, New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 139, pl. 10, figs. 8a-8c.

14452. Spiriferina pulchra (Meek). Cotypes and plesiotypes.
 14456. Upper Carboniferous. Long Valley and Ruby Valley, and White Pine District, Nevada; Weber Canyon, Utah.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 85, pl. 8, figs. I-Ie; pl. 12, figs. I2-I2d.

See Spirifer pulchra.

35199. Spiriferina solidirostris (White). Plesiotype.

Madison (Miss.). Gallatin Range, Yellowstone National
Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 545, pl. 71, fig. 10a.

35339. Spiriferina solidirostris (White)? Plesiotypes.
Millsap (Miss.). Perry Park, Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 294, pl. 1, figs. 3, 4.

8533. Spirigera monticola White. Cotypes.
Lower Carboniferous. Mountain Spring, Old Mormon
Road, Nevada.

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 8 vo., 1874, p. 16; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1877, p. 91, pl. 5, figs. 11a-11d.

= Athyris monticola.

8534. Spirigera obmaxima (McChesney). Plesiotypes.
Lower Carboniferous. Mountain Spring, Old Mormon
Road, Nevada.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 92, pl. 5, fig. 12.

=Cliothyris obmaxima.

8514. Spirigera planosulcata (Phillips). Plesiotypes. Upper Carboniferous. Near Santa Fé, New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 143, pl. 10, figs. 5a-5d.

=Cliothyris royssii.

8507. Spirigera subtilita (Hall). Plesiotypes. Upper Carboniferous. Exact locality unknown.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 141, pl. 10, figs. 6a-6c.

=Seminula subtilita.

14688. Spirocyathus atlanticus (Billings). Plesiotype.
15301. Lower Cambrian. Straits of Belle Isle, Labrador, and Silver Peak, Nevada.

Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 600, pl. 1, figs. 1b-d, 2, 2a.

See Archæocyathus atlanticus.

23853. Spirodentalium osceola Walcott. Cotypes. Upper Cambrian. Osceola Mills, Wisconsin.

Walcott, Proc. U. S. Nat. Mus., XIII, 1890, p. 271, pl. 20, fig. 12.

270. Spironema tenuilineata (Meek and Hayden). Holotype. Fox Hills (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 342, pl. 32. figs. 9a-c.

See Turbo tenuilineatus.

115428. Spirorbis clymenioides Guppy. Holotype. Eocene. San Fernando, Trinidad, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 534. pl. 26, fig. 10.

9073. Spirorbis? dickhauti White.

Cotypes.

Eocene. Little Rock, Arkansas.

White, Proc. U. S. Nat. Mus., III, 1880, p. 161.

=Tubulostium dickhauti.

164882. Spisula callistæformis Dall.

Holotype.

Eocene. Chicagof Cove, Alaska.

Dall, Harriman Alaska Exped., IV, 1904, p. 108, pl. 9, fig. 9.

Miocene. Magnolia, Duplin County, North Carolina.

Dall Trans Wagner Free Just Sci Phila III Pt. III and III Pt. III Pt. III and III Pt. III P

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1890. p. 898, pl. 27, figs. 2, 24.

153779. Spisula (Hemimactra) delumbis Conrad. Plesiotypes Miocene. York River, Virginia.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 189. p. 897, pl. 27, fig. 26.

135906. Spisula (Hemimactra) densa Dall. Holotype. Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898. p. 900, pl. 27, fig. 22.

135905. Spisula (Hemimactra) dodona Dall. Cotypes. Oligocene. Oak Grove, Santa Rosa County, Florida. Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 896, pl. 27, figs. 7, 13, 25.

153784. Spisula (Hemimactra) duplinensis Dall. Holotype.
Miocene. Natural Well, Duplin County, North Carolina.

Dall. Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898,
p. 898, pl. 30, fig. 1.

Spisula (Hemimactra?) magnoliana Dall. Holotype.
 Miocene. Magnolia, Duplin County, North Carolina.
 Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 899, pl. 27, fig. 29.

153782. Spisula (Hemimactra) marylandica Dall. Holotype. Miocene. Jones Wharf, Patuxent River, Maryland.
Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 897, pl. 28, fig. 5.

153803. Spisula (Hemimactra) subponderosa (d'Orbigny).

Plesiotype.

Miocene. St. Marys, Maryland.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 899, pl. 27, figs. 3, 16.

Oligocene. Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 758.

23024. Spondylus fragilis Stanton. Cotypes.

Knoxville (Lower Cret.). Near Stephenson, Tehama
County, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 35, pl. 2, fig. 3.

111622. Spondylus inornatus Whitfield. Holotype. Miocene. Shiloh, New Jersey. Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 34, pl. 5, figs. 1, 2.

155735. Sportella compressa (Lea). Plesiotype.
Miocene and Pliocene. Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900,
p. 1130, pl. 25, fig. 3a.

155732. Sportella constricta (Conrad). Plesic Pliocene. Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III,
p. 1128, pl. 25, figs. 4, 4a.

135869. Sportella lioconcha Dall.
Oligocene. Santa Rosa County, Florida.
Dall, Trans. Wagner Free Inst. Sci. Phila., III., Pt.
p. 1128, pl. 44, fig. 24.

135871. Sportella lubrica Dall. Holotype.

Oligocene. Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1127, pl. 44, fig. 9.

135872. Sportella obolus Dall.

Holotype.

Oligocene. Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900. p. 1126, pl. 44, fig. 18.

155726. Sportella pelex Dall.

Holotype.

Miocene. Petersburg, Virginia.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900. p. 1131, pl. 44, fig. 10.

155725. Sportella petropolitana Dall.

Holotype.

Miocene. Petersburg, Virginia.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1130, pl. 45, fig. 10.

155734. Sportella protexta (Conrad).

Plesiotype.

Pliocene. Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1129, pl. 25, f. 3.

135873. Sportella unicarinata Dall.

Holotype.

Oligocene. Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900. p. 1127, pl. 44, fig. 13.

111589. Sportella whitfieldi Dall.

Holotype.

Miocene. Jericho, Cumberland County, New Jersey.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1128.

144323. Sportella yorkensis Dall.

Holotype.

Miocene. Near Yorktown, Virginia.

Dall, Trans. Wagner Free Inst. Sci Phila., III, Pt. V, 1900, p. 1130, pl. 44, fig. 1.

35315. Squamularia perplexa (McChesney).

Plesiotypes.

35316. Hermosa (Upper Carb.). Deadwood Gulch, Rico quadrangle and Punch Gulch, Crested Butte quadrangle. Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 392, pl. 6. figs. 8, 9, 10, 11.

20137. Stearnsia robinsi White.

Cotypes:

Washita (Lower Cret.). Six miles north of Fort Worth. Texas.

White, Proc. Acad. Nat. Sci. Phila., for 1887, p. 33, pl. 2, figs. 7-9 = Remondia robinsi.

25480. Steganus barrandei Scudder.

Holotype.

Older Tertiary. Roan Mountains, western Colorado.

Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 28. pl. 8, fig. 5

43710. Stellipora antheloidea Hall. Plesiotype and figured sections.

Trenton (Ord.). Trenton Falls, New York.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 263, pl. 14, figs. 1, 1a.

43642. Stellipora limitaris Ulrich.

Cotypes.

Richmond (Ord.). Clarksville, Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 126, pl. 12, figs. 8-8c.

=Constellaria limitaris.

44066. Stenopora americana Ulrich. Figured sections and fragment of holotype. Keokuk (Miss.). Nauvoo, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 437, pl. 74, figs. 1, 1a.

43322. Stenopora americana varsoviensis Ulrich. Figured sections of holotype.

Keokuk (Miss.). Warsaw, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 437, pl. 74, figs. 3, 3a.

43323. Stenopora angularis Ulrich. Figured sections and fragment of holotype.

Keokuk (Miss.). Lagrange, Missouri.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 439, pl. 74, figs. 6-6b.

- 43319. Stenopora carbonaria Worthen. Figured sections of plesiotype.

  Coal Measures (Upper Carb.). Lawrence, Kansas.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 445, pl. 73, figs. 8, 8a.
- 43315. Stenopora carbonaria conferta Ulrich. Figured sections of holotype.

  Coal Measures (Upper Carb.). Caseyville, Illinois.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 446, pl. 73, figs. 9, 9a.
- 43316. Stenopora carbonaria maculosa Ulrich. Holotype and figured sections.

  Coal Measures (Upper Carb.). Caseyville, Illinois.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 445, pl. 73, figs. 10, 10a.
- 43314. Stenopora cestriensis Ulrich. Figured sections of holotype. Chester (Miss.). Chester, Illinois.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 442, pl. 74, figs. 7, 7a.
- 43318. Stenopora emaciata Ulrich. Holotype and figur-Keokuk (Miss.). Bentonsport, Iowa. Ulrich, Geol. Surv. Ill., VIII, 1890, p. 438, pf
- 43317. Stenopora intercalaris Ulrich. 1
  fra

  Keokuk (Miss.). Warsaw, Illinois.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 435.

43325. Stenopora intermittens Ulrich. Holotype and figured sections.

Keokuk (Miss.). Warsaw, Illinois. Ulrich, Geol. Surv. Ill., VIII, 1890, p. 440, fig. 16.

43320. Stenopora meekana Ulrich. Figured sections of holotype. Chester (Miss.). Chester, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 443, pl. 73, figs. 7-7a.

- 44065. Stenopora montifera Ulrich. Figured sections and fragment of holotype.

  Keokuk (Miss.). Otter Creek, Jersey County, Illinois.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 438, pl. 74, figs. 4-4b.
- 43321. Stenopora ramosa Ulrich. Cotypes and figured sections. Chester (Miss.). Sloans Valley, Pulaski County, Kentucky.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 442, pl. 73, figs. 6, 6c.

43324. Stenopora rudis Ulrich. Holotype and figured sections
Chester (Miss.). Sloans Valley, Pulaski County, Kentucky.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 444, pl. 72, figs. 8-8b.

43798. Stenopora? signata Ulrich. Figured sections of holotype. Coal Measures (Upper Carb.). Caseyville, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 446, pl. 73, figs. 5, 5a, 5h

- 43796. Stenopora tuberculata Prout. Figured sections of plesiotypes.

  Chester (Miss.). Chester and Warsaw, Illinois.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 441, text fig. 17, figs. 178, 178.
- 14883. Stenotheca? elongata Walcott. Cotype and plesiotype.
   15364. Lower Cambrian. Secret Canyon, Eureka District.
   Nevada, and L'Anse au Loup, Labrador.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 23, pl. 9, figs. 2, 2a; Bull. No. 3o, U. S. Geol. Surv., 1886, p. 129, pl. 12, figs. 4-4b; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 617. pl. 74, figs. 9-9b.

15365. Stenotheca rugosa (Hall). Plesiotype Lower Cambrian. Troy, New York.

Walcott, Bull. No. 30, U. S. Geol. Surv., 1886, p. 128, pl. 12, figs 1-1e; Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 617, p. 74, figs. 1-1i.

- 18310. Stenotheca? rugosa acuta-costa Walcott. Cotype:
  Lower Cambrian. Conception Bay, Newfoundland.
  Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 617, pl. 72
  figs. 2-2b.
- 18311. Stenotheca? rugosa erecta Walcott. Cotypes Lower Cambrian. Conception Bay, Newfoundland.

  Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 617, pl.; 16g. 4.

18313. Stenotheca? rugosa levis Walcott. Holotype. Lower Cambrian. Conception Bay, Newfoundland.

Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 617, pl. 74, figs. 5, 5a.

18312. Stenotheca? rugosa paupera (Billings). Plesiotype. Lower Cambrian. Conception Bay, Newfoundland.

Walcott, Tenth Ann. Rept. U. S. Geol. Surv., 1890, p. 617, pl. 74, fig. 3.

45998. Stenotheca unguiformis Ulrich. Holotype.
Trenton (Ord.). Mercer County, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 843, pl. 61, figs. 42-44.

157516. Stephanocœnia fairbanksi Vaughan. Holotype. Cretaceous? Southern California.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 151, pl. 17,

figs. 11, 11a.
158318. Stephanomorpha monticuliformis Vaughan. Cotypes.

158319. Midwayan (Eocene). Prairie Creek, Alabama.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 157, pl. 18, figs. 5-7.

158215. Steriphonotrochus pulcher Vaughan. Holotype. Red Bluff (Oligocene). Red Bluff, Wayne County, Mississippi.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 113, pl. 9, figs. 5-5d.

43721. Stictopora acuta Hall.

Plesiotype.

Trenton (Ord.). Trenton Falls, New York.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 168, pl. 8, figs. 1, 1a, 1b.

=Pachydictya acuta.

43720. Stictopora basalis Ulrich.

Holotype.

Stones River (Ord.). Shelbyville, Tennessee.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 169, pl. 8, figs. 4, 4a.

=Rhinidictya basalis.

43651. Stictopora gilberti Meek.

Plesiotype.

Onondaga (Dev.). Falls of the Ohio.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 168, pl. 8, figs. 2, 2a.

=Cystodictya gilberti.

43812. Stictopora mutabilis Ulrich.

Cotyp

Black River (Ord.). Minneapolis and St. Paul, Misota.

Ulrich, Fourteenth Ann. Rept. Geol. and Nat. Hist. Surv. 1886, p. 66.

=Rhinidictya mutabilis.

43813. Stictopora mutabilis major Ulrich. Cotype.

Black River (Ord.). St. Paul and Minneapolis, Minnesota.

Ulrich, Fourteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn. 1886, p. 67.

- =Rhinidictya mutabilis major.
- 43470. Stictoporella angularis Ulrich. Cotypes and figured sections. Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Fourteenth Ann. Rept. Geol. and Nat. Hist. Surv., Minn., 1886, p. 71; Geol. and Nat. Hist., Surv., Minn., Final Rept., Ill. Pt. I, p. 182, pl. 11, figs. 1-3, 6, 8-11. 1893.

44101. Stictoporella angularis intermedia Ulrich. Cotypes. Stones River (Ord.). Minneapolis, Minnesota (Fillmore County, Minnesota, in error.)

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I 1893, p. 183, pl. 11, figs. 4, 5, 7.

43770. Stictoporella? basalis Ulrich. Cotypes and figured sections. Warsaw (Miss.). Warsaw, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 532, pl. 68, figs. 5, 5a; pl. 35, figs. 2, 2a.

- =Intrapora basalis.
- 43471. Stictoporella cribrosa Ulrich. Cotypes and figured sections.

  Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Fourteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn. 1886, p. 69; Geol. and Nat. Hist. Surv. Minn., Final Rept III, Pt. I, 1893, p. 184, pl. 10, figs. 21-25; pl. 11, figs. 22, 3

43613. Stictoporella dumosa Ulrich. Cotype.

Black River (Ord.). St. Paul, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt.1 1893, p. 181.

43612. Stictoporella exigua Ulrich. Cotypes and figured sections
Trenton (Ord.). Montreal, Canada.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, P.1 1893, pl. 13, figs. 18-21.

32472. Stictoporella frondifera Ulrich. Cotypes and figure sections

Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Fourteenth Ann. Rept. Geol. and Nat. Hist. Surv. Miss. 1886, p. 72; Geol. and Nat. Hist. Surv. Minn., Final Ref. III, Pt. I, 1893, p. 183, pl. 11, figs. 12-19.

43722. Stictoporella interstincta Ulrich.

Utica (Ord.). West Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 169, p. figs. 9, 9a.

=Stictoporella flexuosa.

43328. Stictoporella interstincta Ulrich. Figured section of plesiotype.

Utica (Ord.). West Covington, Kentucky.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 394, figs. 14a, b.

=Stictoporella flexuosa.

43723. Stictoporella rigida Ulrich.

Holotype.

Black River (Ord.). Fountain, Minnesota.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XII, 1890, p. 188, figs. 13, 13a-b; Geol. and Nat. Hist. Surv. Minn., Final Rept., III, 1893, Pt. I, p. 180, pl. 11, figs. 20-21.

43377. Stictoporella? undulata Ulrich. Holotype.

Chester (Miss.). Litchfield, Kentucky.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 533, pl. 69, figs. 6-6b.

=Intrapora undulata.

43327. Stictotrypa punctipora (Hall). Figured sections of plesiotype.

Waldron (Sil.). Waldron, Indiana.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 394, fig. 13a.

43326. Stictotrypa similis (Hall). Figured section of plesiotype. Waldron (Sil.). Waldron, Indiana.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 394, figs. 13b, c.

44060. Stigmatella clavis (Ulrich). Plesiotypes and figured sections. Utica (Ord.). Covington, Kentucky.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 34, pl. 10, fig. 4.

See Leptotrypa clavis.

43197. Stigmatella crenulata Ulrich and Bassler. Cotypes and figured sections.

Richmond (Ord.). Hanover, Ohio.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 34, pl. 9, figs. 1-4; pl. 14, figs. 1, 2.

44059. Stigmatella dychei (James). Plesiotype and figured sections. Lorraine (Ord.). Lebanon, Ohio.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 34, pl. 10, fig. 11.

43202. Stigmatella interporosa Ulrich and Bassler. Cotypes and figured sections.

Richmond (Ord.). Hanover, Ohio.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 35, pl. 12, figs. 4, 5.

44058. Stigmatella irregularis (Ulrich). Plesiotypes and figured sections.

Lorraine (Ord.). Hamilton, Ohio.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 34, pl. 10, figs. 5, 6; pl. 14, figs. 6-8.

See Chætetes irregularis.

43203. Stigmatella nana Ulrich and Bassler. Cotypes and figured sections.

Utica (Ord.). West Covington, Kentucky.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 36, pl. 10, figs. 7-10; pl. 14, figs. 11, 12.

43204. Stigmatella nicklesi Ulrich and Bassler. Cotypes and figured sections.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 36, pl. 10, figs. 1-3; pl. 14, figs. 9, 10.

43201. Stigmatella personata Ulrich and Bassler. Holotype and figured sections.

Richmond (Ord.). Hanover, Ohio.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 35, pl. 12, figs. 1-3.

43200. Stigmatella spinosa Ulrich and Bassler. Holotypeand figured sections.

Richmond (Ord.). Versailles, Indiana.

Ulrich and Bassler, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 34, pl. 9, figs. 5-8.

20124. Stomatia obstricta White. Cotypes. Chico (Cret.). Little Cow Creek, Shasta County, California.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 18, pl. 4, figs. 10, 11.

43261. Stomatopora inflata Hall.

Plesiotypes.

43262. Lorraine (Ord.). Cincinnati, Ohio.

Black River (Ord.). Near Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 117, pl. 1, figs. 13-21.

43263. Stomatopora proutana Miller. Plesiotype. Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 117, pl. 1, figs. 8-12.

=Stomatopora delicatula.

43260. Stomatopora tenuissima Ulrich.

Holotype.

Utica (Ord.). West Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XII, 1890, p. 175, figs.
2-2c; Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 116, pl. 1, figs. 16, 17.

43258. Stomatopora turgida Ulrich.

Holotype.

Richmond (Ord.). Wilmington, Illinois.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XII, 1890, p. 176, figs.
3, 3a-c; Geol. and Nat. Hist. Surv. Minn., Final Rept., III,
Pt. I, 1893, p. 118, pl. 1, figs. 22, 23.

30185. Stomechinus hyatti Clark. Holotype. Jurassic. Taylorsville, California.

Clark, Bull. No. 97, U. S. Geol. Surv., 1893, p. 56, pl. 23, figs. 1a-b.

33973. Straparollus clymenioides (Hall)? Plesiotype.
Ouray (Upper Dev.). Durango and Salida, Colorado.

Girty, Twentieth Ann. Rept. U. S. Geol. Surv., Pt. II, 1900, p. 61, pl. 7, figs. 7, 8.

13941. Straparollus newarkensis Walcott. Cotypes.
Upper Devonian. Newark Mountain, Eureka District,
Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 187, pl. 16, figs. 7, 7a.

6510. Straparollus (Euomphalus) rugosus (Hall). Plesiotypes. Upper Carboniferous. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Nebr. (Hayden), 1872, p. 230, pl. 6, figs. 6a, 5b; pl. 11, fig. 4a.

14220. Straparollus utahensis (Hall and Whitfield). Cotypes and plesiotypes.

Madison (Miss.). Dry Canyon, Utah, and Yellowstone National Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 573, pl. 66, figs. 10a, 10b, 10c.

See Euomphalus (Straparollus) utahensis.

35314. Streblopteria media Herrick. Plesiotype.
Millsap (Miss.). Perry Park, Colorado.
Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 307, pl. 1, fig. 13.

14359. Streblopteria similis Walcott. Cotype.

Lower Carboniferous Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 230, pl. 8, figs. 4-4d; pl. 19, fig. 7.

43482. Streblotrypa amplexa Ulrich. Holotype. Waverly (Miss.). Sciotoville, Ohio.

Ulrich, Bull. Denison Univ., IV, 1888, p. 86, pl. 14, fig. 13.

43484. Streblotrypa (Lioclema?) denticulata Ulrich. Cotypes. Waverly (Miss.). Richfield, Ohio.

Ulrich, Bull. Denison Univ., IV, 1888, p. 88, pl. 14, figs. 18, 19.

43483. Streblotrypa hertzeri Ulrich. Holotype. Waverly (Miss.). Richfield, Ohio.

Ulrich, Bull. Denison Univ., IV, 1888, p. 85, pl. 14, fig. 8.

44095. Streblotrypa major Ulrich. Cotypes and figured sections. Keokuk (Miss.). Kings Mountain, Kentucky.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 666, pl. 71, figs. 8, 8a; pl. 72, figs. 1, 1a.

43311. Streblotrypa nicklesi Ulrich. Cotypes and figured sections. Chester (Miss.). Kaskaskia, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 667, pl. 71, figs. 9-9c.

43481. Streblotrypa striata Ulrich.

Upper Waverly (Miss.). Richfield, Ohio.

Holotype.

Ulrich, Bull. Denison Univ., IV, 1888, p. 87, pl. 14, figs. 12, 12a.

157842. Strepsidura pachecoensis Stanton. Holotype. Lower Tejon (Eocene). One mile north of Pacheco, California.

Stanton, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. I, 1897, p. 1045, pl. 67, fig. 2.

33322. Streptacis whitfieldi Meek. Holotype. Upper Carboniferous. Danville, Illinois.

Meek, Proc. Acad. Nat. Sci. Phila., 1871, p. 173.—Meek and Worthen Geol. Surv. Ill., V, 1873, p. 596, pl. 29, fig. 1.

42538. Streptelasma breve Ulrich. Cotypes.
Stones River (Ord.). Big Spring, near Fountain, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 92, figs. 7a-d.

42557. Streptelasma parasiticum Ulrich. Holotype.
Black River (Ord.). Minneapolis. Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept, III, Pt. I, 1893, p. 89, fig. 6.

27737. Streptelasma waynense (Safford). Plesiotypes.
34114. Helderbergian (Lower Dev.). Big Sandy River, Benton
County, Tennessee, and Atoka quadrangle, Indian
Territory.

Girty, Nineteenth Ann. Rept. U. S. Geol. Surv., 1900, p. 555.

13791. Streptorhynchus chemungensis (Conrad). Plesiotype. Middle and Upper Devonian. Eureka District, Nevada. Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 117, pl. 13, figs. 7, 16.

> =Schuchertella chemungensis. See Orthothetes chemungensis.

14313. Streptorhynchus crenistria (Phillips). Plesiotype.
Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 279, pl. 18, fig. 14. —Orthotetes keokuk,

14221. Streptorhynchus equivalvis and inequalis Hall and Whitfield. Plesiotypes.

Waverly (Miss.). Ogden and Logan Canyon, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 252 (as equivalvis), pl. 4, figs. 1, 2 (as inequalis).

=Schuchertella inequalis. See Orthothetes inæqualis. 14228. Streptorhynchus inflatus White and Whitfield. Plesiotypes. Waverly (Miss.). Dry Canyon, Oquirrh Mountains, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 252, pl. 4, fig. 3.

=Schuchertella inflatus.

See Orthothetes inflatus.

17274. Streptorhynchus minor Walcott. Cotype.
Upper Pogonip (Ord.). Lone Mountain, near Eureka,
Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 75, pl. 11, fig. 9. = Strophomena? minor.

- 44994. Streptorhynchus ulrichi Hall and Clarke. Holotype. Chester (Miss.). Two miles east of Scottsburg, Kentucky.

  Hall and Clarke, Nat. Hist. New York, Pal. VIII, Pt. I, 1892, pp. 268, 351, pl. 11 B, fig. 15.
- 46572. Streptospongia labyrinthica Ulrich. Holotype. Richmond (Ord.). Near Lebanon, Kentucky.

  Ulrich, Amer. Geol., III, 1889, p. 236, fig. 8; p. 244.
- 35406. Stromatocerium pustulosum Safford. Plesiotype.
  Trenton (Ord.). Columbia, Tennessee.

  Hayes and Ulrich, U. S. Geol. Surv., Polio 95, 1903, illustration sheet, figs. 23, 24.
- 43614. Stromatotrypa ovata Ulrich. Cotypes and figured sections.
  Black River (Ord.). Minneapolis, Minnesota.

  Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 302, pl. 24, figs. 24-31.
- 111657. Strombina (Amycla) lævis Whitfield. Cotype.
  Miocene. Jericho and Shiloh, New Jersey.
- Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 111, pl. 20, figs. 1-4.

  Holotype.
- Oligocene. Isthmus of Darien.
  Dall, Proc. U. S. Nat. Mus., XIX, 1896, p. 312, pl. 29, fig. 7.
- 113784. Strombinella acuformis Dall. Holotype.
  Oligocene Potrero Rio Amina Santo Domingo West

Oligocene. Potrero, Rio Amina, Santo Domingo, West Indies.

Dall, Proc. U. S. Nat. Mus., XIX, 1896, p. 312, pl. 29, fig. 6.

- I 1431. Strombus albirupianus Dall. Cotypes.

  Jacksonian (Eocene). Claiborne, Alabama.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 174, pl. 12, figs. 2, 10.
- Oligocene. West of Chipola River, Florida.

  Dell Trans Wagner Free Inst Sci Phila III Pt I 1800 N NO.
  - Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, W. 175, pl. 12, figs. 1, 4.

- Oligocene. Near Baileys Ferry, Chipola River, Florida

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p.
  176, pl. 4, fig. 1; Pt. II, 1892, p. 263, pl. 13, figs. 1, 3; s. S. chipolanus).
- 25675. Stropheodonta beckii Hall. Plesiotype Helderbergian (Lower Dev.). Cape Leidy, Arctic America Meek, Amer. Journ. Sci. (2), XL, 1865, p. 33.
- 13797. Stropheodonta calvini Miller. Plesiotype Middle Devonian. Eureka District, Nevada.

  Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 122, pl. 13, fig. 6
- 14010. Stropheodonta canace Hall and Whitfield. Plesiotype Upper Devonian. Treasure Hill, White Pine District, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt II. 1877, p. 246, pl. 3, figs. 1-3.

13799. Stropheodonta demissa (Conrad). Plesiotype Middle Devonian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 118, pl. 2, fgs. 9-9b.

See Stropheodonta dimosa and Strophomena (Strophodonta) subdemissa.

17917. Stropheodonta dimosa (Conrad). Plesiotype Middle Devonian. Near New Buffalo, Iowa.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, pl. 3 A fig. 14.

- =Stropheodonta demissa.
- 25676. Stropheodonta headleyana Hall. Plesiotype Helderbergian (Lower Dev.). Cape Leidy, Arctic America Meek, Amer. Journ. Sci. (2), XL, 1865, p. 33.

  = Strophonella headleyana.
- 13804. Stropheodonta inequiradiata (Hall). Plesiotyp Middle Devonian. Combs Peak, Nevada. Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 120, pl. 2, fice
- 17916. Stropheodonta iowensis (Owen). Plesiotype Middle Devonian. North of Iowa City, Iowa.

  Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, pl. 3 in fig. 17 (as Chonetes sp. undet.).

  See Chonetes (?) iowensis.
- 5082. Stropheodonta magnifica Hall. Plastotype Oriskany (Lower Dev.). Albany County, New York. Hall, Nat. Hist. New York, Pal. III, 1859, p. 414, pl. 94, fig. 2c, 2d.

13796. Stropheodonta perplana (Conrad). Plesiotype.
Middle and Upper Devonian. Eureka District, Nevada.
Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 120, pl. 13, fig. 11.

=Stropheodonta (Leptostrophia) perplana.

13802. Stropheodonta punctulifera (Conrad). Plesiotype.
Middle Devonian. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 121, pl. 13, fig. 10. =Strophonella punctulifera.

111972. Strophia (Eostrophia) anodonta Dall. Cotypes.
Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 13, pl. 1, figs. 8c, 8d.

111975. Strophia (anodonta var.?) floridana Dall. Holotype. Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 13, pl. 1, fig. 6.

Strophodonta. See Stropheodonta.

8548. Strophomena filitexta (Hall). Plesiotypes. Richmond (Ord.). Silver City, New Mexico.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 69, pl. 4, fig. 8.

=Strophomena incurvata.

17223. Strophomena fontinalis White. Cotypes.
Middle Ordovician. Fish Spring, House Range, Utah.

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 8 vo., 1874, p. 10; Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1877, p. 54, pl. 3, figs. 4a-4c.

=Orthis (Plæsiomya) fontinalis.

17220. Strophomena nemea Hall and Whitfield. Cotypes.
Upper Pogonip (Ord.). Pogonip Mountain, White Pine
District, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 233, pl. 1, fig. 15.—Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 71.

[This is an orthoid near Dalmanella subæquata and may be a large specimen of D. pogonipensis (Hall and Whitfield).]

35407. Strophomena planoconvexa Hall. Plesiotypes. Lorraine (Ord.). Covington, Kentucky.

Hayes and Ulrich, U. S. Geol. Surv., Folio 95, 1903, illustration sheet, figs. 18, 19.

14222. Strophomena rhomboidalis (Wilckens). Plesiotypes. Waverly (Miss.). Dry Canyon, Oquirrh Mts., Utali.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 253, pl. 4, fig. 4.

=Leptæna rhomboidalis.

8527. Strophomena rhomboidalis (Wilckens). Plesiotype Lower Carboniferous. Mountain Spring, Old Mormo Road, Nevada.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 187 . p. 85, pl. 5, fig. 5.

=Leptæna rhomboidalis.

24420. Strophomena (Strophodonta) subdemissa Hall.

Plesiotype

Base of Upper Devonian. Clear Water River, Mackenz River Basin, Canada.

Meek, Trans. Chicago Acad. Sci., I, 1868, p. 88, pl. 13, figs. 72—Stropheodonta demissa.

35363. Strophostylus remex White. Plesiotype 35364. Rico (Upper Carb.). Scotch Creek and Marguerite Creek Rico quadrangle, Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 463, pl. 16 figs. 4, 4a, 5-5b.

35365. Strophostylus subovatus Worthen? Plesiotype Hermosa (Upper Carb.). Sandstone Mountain, Ria quadrangle, Colorado.

Girty, Prof. Pap. No. 16, U. S. Geol. Surv., 1903, p. 463, pl. 15, figs. 3, 3a.

45999. Strophostylus textilis Ulrich and Scofield. Cotypes to Black River (Ord.). St. Paul, Fillmore County, next 46002. Cannon Falls, and Chatfield, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Fin-Rept., III, Pt. II, 1897, p. 1064, pl. 82, figs. 49-54.

43296. Strotopora dermata Ulrich. Holotype Keokuk (Miss.). Keokuk, Iowa.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 488, pl. 77, figs. 8-8a.

43295. Strotopora perminuta Ulrich. Cotype
Onondaga (Dev.). Falls of the Ohio.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 487, pl. 47, figs. 4-4b.

46573. Strotospongia maculosa Ulrich and Everett. Figure sections of holotype Stones River (Ord.). Dixon, Illinois.

Ulrich and Everett, Geol. Surv. Ill., VIII, 1890, p. 277, pl. 8, in ic-id.

25673. Stylonurus excelsior Hall. Plesioty:
Catskill (Upper Dev.). Meshoppen, Wyoming Court
Pennsylvania.

Hall and Clarke, Nat. Hist. New York, Pal. VII, 1888, p. © pl. 26A, figs. 1-3.

See Dolichocephala lacoana.

158273. Stylophora minutissima Vaughan. Holotype. Upper Oligocene. Russell Springs, Flint River, Georgia. Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 131, pl. 13, figs. 13-15.

 158274. Stylophora ponderosa Vaughan. Cotypes.
 158275. Lower Oligocene. Salt Mountain, south of Jackson, Alabama.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 132, pl. 13, fig. 16; pl. 14, figs. 1-1b.

163898. Subemarginula retiporosa Dall. Holotype.
Pliocene. Shell Creek, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 55, fig. 3; pl. 60, fig. 17.

46003. Subulites beloitensis Ulrich and Scofield. Holotype. Stones River (Ord.). Beloit, Wisconsin.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept.,

III, Pt. II, 1897, p. 1072, pl. 81, figs. 9-11.

46004. Subulites canadensis Ulrich. Holotype. Black River (Ord.). Ottawa, Canada.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1071, pl. 81, fig. 3.

46005. Subulites conradi Ulrich and Scofield. Holotype. Stones River (Ord.). Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1071, pl. 81, figs. 4, 5.

46006. Subulites dixonensis Ulrich and Scofield. Holotype. Stones River (Ord.). Dixon, Illinois.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1071, pl. 81, figs. 6-8.

46007. Subulites elongatus Conrad? Plesiotype.
Trenton (Ord.). Ottawa, Canada.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, pl. 81, figs. 1, 2.

46075. Subulites nanus Ulrich.

Stones River (Ord.). Lebanon, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II,

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., 111, Pt. 11, 1897, p. 1072, pl. 81, figs. 18, 19.

46008. Subulites parvus Ulrich. Holotype.
Stones River (Ord.). High Bridge, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1072, pl. 81, figs. 16, 17.

46009. Subulites pergracilis Ulrich and Scofield. Cotypes.
Trenton (Ord.). Wykoff, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1072, pl. 81, figs. 12-15.

46010. Subulites regularis Ulrich. Cotypes.

Stones River (Ord.). High Bridge, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II. 1897, p. 1072, pl. 81, fig. 35; pl. 82, figs. 47, 48.

9008. Succinea (Brachyspira) papillispira White. Holotype and plastotype.

Green River (Eocene). Alkali Station, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883. p. 45, pl. 19, fig. 4a; Third Ann. Rept. U. S. Geol. Surv.. 1883, p. 457, pl. 29, fig. 26.

111635. Surcula parva (Conrad)?

Plesiotype.

Miocene. Jericho, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 117, pl. 21, fig. 1.

6067. Sycotypus elongatus Gill.

Holotype.

Miocene. North Carolina.

Gill, Amer. Journ. Conch., Phila., III, 1867, p. 150, text fig.

[Probably=Fulgur pyrum var. excavatum (Conrad). See Dall.

Trans. Wagner Free Inst. Sci. Phila., III, 1890, p. 112.]

24648. Symphysurus? goldfussi Walcott. Holotype Upper Pogonip (Ord.). McCoys Ridge, Eureka District. Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 95, pl. 12, iig. 16.

39938. Synbathocrinites granulatus Troost.

Chirotype.

Silurian. Decatur County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 61.

39939. Synbathocrinites tennesseæ Troost. Chirotypes. Silurian. Decatur County, Tennessee.

Troost, Proc. Amer. Assoc. Adv. Sci., II, 1850, p. 61.

347. Syncyclonema rigida (Hall and Meek). Cotypes. Fox Hills (Cret.). Cheyenne and Moreau Rivers, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 27, pl. 16, figs 5a, 5b.

12272. Syncyclonema rigida (Hall and Meek). Plesiotypes Cretaceous. Forks of Cheyenne River, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 188.
p. 383, pl. 7, fig. 1.

111589. Syndosmya? nuculoides (Conrad).

Plesiotype.

Miocene. Shiloh, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 81, pl. 15 figs. 7-9.

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6528. Synocladia biserialis Swallow. Plesiotypes. Upper Carboniferous. Nebraska City, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Nebr. (Hayden), 1872, p. 156, pl. 7, figs. 5a-5e.

=Septopora biserialis.

8512. Synocladia biserialis Swallow. Plesiotypes. Red Wall (Upper Carb.). Camp Apache. Navajo County.

Red Wall (Upper Carb.). Camp Apache, Navajo County, Arizona.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 107, pl. 7, figs. 3a, 3b.

=Septopora biserialis.

25511. **Syntomostylus rudis** Scudder. Holotype. Older Tertiary. Roan Mountains, western Colorado.

Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 50, pl. 9, fig. 10.

1006. Syntrilasma hemiplicata (Hall). Plesiotypes.

6907. Upper Carboniferous. Vermillion Creek, Kansas, near

15731. Nebraska City, and twelve miles west of Vandalia, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Neb. (Hayden), 1872, p. 177, text figs. 7a-7c, 8a, 8b; pl. 6, figs. 1a, 1b.

=Enteletes hemiplicata.

46574. Syringolasma wortheni Ulrich. Figured sections of holotype.

Hamilton (Dev.). Thunder Bay, Michigan.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 250, pl. 7, fig. 4b.

Syringophyllum wortheni Ulrich=Syringolasma wortheni.

35161. Syringopora aculeata Girty. Holotype.

Madison (Miss.). Crowfoot Ridge, Gallatin Range, Yellowstone National Park.

Girty, Mon. XXIII, Pt. II, U. S. Geol. Surv., 1899, p. 509, pl. 67, figs. 5a, 5b.

6977. Syringopora multattenuata McChesney. Plesiotypes.
Upper Carboniferous. Four miles above mouth of Platte
River, Nebraska.

Meek, Final Rept. U. S. Geol. Surv. Neb. (Hayden), 1872, p. 144, pl. 1, figs. 5a-5d.

24547. Syringopora occidentalis Meek. Holotype.
Upper Carboniferous. Southwest of Bald Mountain, Uinta
Range, Utah.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 50, pl. 6, figs. 2, 2a (named at end of description).

35160. Syringopora surcularia Girty. Cotypes.

Madison (Miss.). Crowfoot Ridge, Gallatin Range, Yellowstone National Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 510, pl. 67, figs. 4a, 4b.

14230. Syringothyris carteri (Hall). Plesiotypes.
35190. Lower Carboniferous. Treasure Hill, White Pine Mountains, Nevada. Madison (Miss.). Yellowstone National Park.

Girty, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 558, pl. 71, figs. 1a-1c.

See Spirifer (Syringothyris) cuspidatus.

- 40878. Tæniaster elegans Miller. Cotypes. Richmond (Ord.). Waynesville, Ohio.

  Miller, Journ. Cincinnati Soc. Nat. Hist., V, 1882, p. 41, pl. 1,
- 43799. Tæniodictya frondosa Ulrich. Cotypes and figured sections. Keokuk (Miss.). Keokuk, Iowa.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 529, pl. 69, figs. 5-5c.
- 43496. Tæniodictya interpolata Ulrich. Holotype. Waverly (Miss.). Richfield, Ohio.

  Ulrich, Bull. Denison Univ., IV, 1888, p. 80, pl. 13, figs. 9, 9a.
- 43800. Tæniodictya ramulosa Ulrich. Cotypes and figured sections. Keokuk (Miss.). Nauvoo, Illinois.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 528, pl. 67, figs. 1a-1l.
- 43362. Tæniodictya subrecta Ulrich.
  St. Louis (Miss.). Elizabethtown, Kentucky.
  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 520, pl. 67, figs. 4-4d.
- 43360. Tæniopora occidentalis Ulrich. Cotypes and figured sections.

  Middle Devonian. Buffalo, Iowa.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 505, pl. 42, figs. 3-3c.
- 44091. Tæniopora penniformis Nicholson. Plesiotypes and figured sections.

  Hamilton (Dev.). Eighteen Mile Creek, New York.

  Ulrich, Geol. Surv. Ill., VIII, 1890, p. 505, pl. 42, fig. 3d.
  - 198. Tancredia? æquilateralis Meek and Hayden. Cotypes.

    Jurassic. Southwest base of Black Hills, South Dakota.

    Meek and Hayden, Proc. Acad. Nat. Sci. Phila. for 1860, p. 183:

    Pal. Upper Mo., Smithsonian Cont. to Knowl. No. 172, XIV.
    1864, p. 96, pl. 3, fig. 8.
- 186. Tancredia americana (Meek and Hayden). Holotype and paratypes
  Fox Hills (Cret.). Mouth of Judith River, Montana.

  Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 142, pl. 38.
  figs. 1b-e.

  See Hettangia americana.

12321. Tancredia bulbosa Whitfield. Cotypes.
12328. Jurassic. East of Belle Fourche River, near Bear Lodge
Butte, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 370, pl. 6, figs. 1-3.

8072. Tancredia? cœlionotus White. Cotypes.
Fox Hills (Cret.). Ten miles west of Greeley, Colorado.
White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879, p. 288, pl. 5, figs. 2a-d.

12282. Tancredia corbuliformis Whitfield. Cotypes.
12328. Jurassic. East of Belle Fourche River, near Bear Lodge
Butte, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 370, pl. 6, figs. 5-8.

8176. Tancredia extensa White. Cotypes.

Jurassic. North side of Bull Lake Fork, Southeastern
Idaho.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 150, pl. 38, fig. 4a.

12338. Tancredia? inornata (Meek and Hayden). Plesiotypes.
12341. Jurassic. East of Belle Fourche River, near Bear Lodge
Butte, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 368, pl. 6, figs. 9-13.

28938. Tancredia? knowltoni Stanton. Holotype.
Jurassic. Sentinel Butte, Yellowstone National Park.

Stanton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 621,
pl. 73, fig. 6.

12321. Tancredia postica Whitfield. Holotype.

Jurassic. East of Belle Fourche River, Black Hills, South
Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 371, pl. 6, fig. 14.

204. Tancredia warrenana Meek and Hayden. Cotypes. Jurassic. Southwest base of Black Hills, South Dakota.
Meek and Hayden, Proc. Acad. Nat. Sci. Phila., 1860, p. 183;
Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 96, pl. 3, fig. 7.

12326. Tancredia warrenana Meek and Hayden. Plesiotypes. Jurassic. Redwater Valley, Black Hills, South Dakota. Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 372, pl. 6, fig. 4.

22890. Tapes cyrimeriformis Stanton. Cotypes.
Colorado (Cret.). Huerfano Park, Colorado.

Stanton, Bull. No. 106, U.S. Geol. Surv. 1802, p. 106, pl. 24

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 106, pl. 24, figs. 1-6.

1847. Tapes diversum Sowerby. Plesiotype.

Post-Tertiary. San Pedro, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean. V, 1856, p. 324, pl. 4, figs. 31, 31b.

8028. Tapes hilgardi Shumard.

Plesiotypes.

Eagle Ford? (Cret.). Bell County, Texas.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 22, pl. 16, figs. 3b, 3c.

13341. Tapes inezensis Conrad. Holotype.
Miocene. Santa Inez Mountains, Santa Barbara County.
California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 192, pl. 7, fig. 1.

13321. Tapes montana Conrad. Holotype.

Miocene. San Buenaventura, Santa Barbara County.

California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 192, pl. 5, figs. 3-5.

1939. Tapes wyomingensis Meek. Cotypes
Fox Hills (Cret.). Mouth of Deer Creek on North Platte
River, Wyoming.

Meek, Fourth Ann. Rept. U. S. Geol. Surv. Terr., 1871, p. 310. = Baroda wyomingensis.

25657. Tarphyceras champlainense (Whitfield). Plesiotypes Beekmantown (Ord.). Fort Cassin, Vermont.

Hyatt, Proc. Amer. Phil. Soc., XXXII, 1894, p. 438, pl. 4 fgs

25656. Tarphyceras macdonaldi Hyatt. Holotype.
Beekmantown (Ord.). Near Lexington, Virginia.
Hyatt, Proc. Amer. Phil. Soc., XXXII, 1894, p. 435.

4-II.

46312. **Technophorus** filistriatus Ulrich. Holotype.

Black River (Ord.). Six miles south of Cannon Falis

Minnesota.

Ulrich, Amer. Geol., X, 1892, p. 101, pl. 7, figs. 11, 12; Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 615, pl. 40, figs. 35, 36.

46313. Technophorus punctostriatus Ulrich. Cotypes Lorraine (Ord.). Covington, Kentucky.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 685, pl. 47, figs. 10-12.

46314. Technophorus subacutus Ulrich. Plastotype Stones River (Ord.). Minneapolis, Minnesota.

Ulrich, Amer. Geol., X, 1892, p. 101, pl. 7, figs. 13, 14; Geol. 35. Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 614 pl. 40, figs. 33, 34.

46315. **Technophorus yoldiiformis** (Ulrich). Holotype and plesiotype.

Utica (Ord.). Covington, Kentucky.

Ulrich, Geol. Surv. Ohio, VII, 1893, p. 685, pl. 47, figs. 13, 14. See Nuculites yoldiaformis.

25350. **Teganium subsphæricum** (Walcott). Plesiotypes. Utica (Ord.). Near Holland Patent, New York.

Rauff, Palaeontographica, XL, 1894, p. 256, pl. 4, figs. 3, 4.

=Sphærodictya subsphærica.

163685. **Teinostoma** (Climacia) calliglyptum Dall. Holotype. Pliocene. Shell Creek, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 60, figs. 1-3.

113100. **Teinostoma** caloosaënse Dall. Holotype. Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 413, pl. 23, fig. 8.

Oligocene. Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 413, pl. 23, figs. 6, 7.

112651. Teinostoma collinus Dall. Holotype. Miocene. Cape Fear River, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 416, pl. 23, fig. 14.

114445. Teinostoma (Solariorbis) duplinense Dall. Holotype. Miocene. Natural Well, Duplin County, North Carolina. Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1893, p. 922, pl. 27, fig. 21.

112652. **Teinostoma funiculus** Dall. . Holotype. Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 417, pl. 23, fig. 15.

Oligocene. Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p.
415, pl. 23, figs. 9, 10.

113098. Teinostoma milium Dall.

Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 413.

113104. Teinostoma opsitelotus Dall. Cotypes.
Pliocene. Caloosahatchie River, near Fort Thompson.
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 414, pl. 19, figs. 5, 5b.

112653. Teinostoma pseudadeorbis Dall. Holotype.
Miocene. Temple Place, near Yorktown, Virginia.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892. p. 417, pl. 23, figs. 12, 13.

112649. Teinostoma steiratum Dall.

Miocene. Cape Fear River, North Carolina.

Holotype.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 415, pl. 23, fig. 11.

135894. Tellina (Angulus) acalypta Dall. Holotype.
Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V. 190. p. 1027, pl. 47, fig. 12.

Oligocene. Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1911.
p. 1025, pl. 46, fig. 16.

Oligocene. Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V. 194
p. 1026, pl. 46, fig. 1.

135699. Tellina (Merisca?) acrocosmia Dall. Holotype. Bowden (Oligocene). Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1020, pl. 46, fig. 10.

135896. Tellina (Angulus) agria Dall. Holotype. Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V. 191
p. 1027, pl. 46, fig. 11.

90948. Tellina (Moerella?) aldrichi Dall. Holotype Chickasawan (Eocene). Lisbon, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V. 191 p. 1017, pl. 46, fig. 9.

3849. Tellina arctata Conrad.

Holotype

Miocene. Astoria, Oregon.

Conrad, Wilkes U. S. Expl. Exped., X, 1849, p. 725, Atlas, 1-18, figs. 3, 3a.

= Macoma arctata.

7916. Tellina (Oudardia) buttoni Dall.

Holotyre

Pleistocene. San Diego, California.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V. 190. p. 1036, pl. 47, fig. 18.

157897. **Tellina (Scissula) calliglypta** Dall. Holotype. Pliocene. Shell Creek, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1036, pl. 47, fig. 1.

157859. **Tellina (Merisca) caloosana** Dall. Holotype. Pliocene. Fort Thompson, Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1030, pl. 47, fig. 2.

Oligocene. Alum Bluff, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p.

114667. **Tellina** (**Macaliopsis**) cloneta Dall. Holotype. Oligocene. Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1020, pl. 46, fig. 8.

1849. Tellina congesta Conrad.

Cotype.

Miocene. Monterey, California.

1018, pl. 47, fig. 6.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, V, 1856, p. 323, pl. 3, figs. 21, 21a.

= Macoma congesta.

154537. Tellina cynoglossa Dall. Holotype. Chickasawan (Eocene). Woods Bluff, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1017, pl. 46, fig. 27.

157860. Tellina (Merisca) dinomera Dall. Holotype.
Pliocene Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1031, pl. 47, fig. 19.

107391. **Tellina** (**Phyllodina**) dodona Dall. Holotype. Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1023, pl. 30, fig. 7.

Tellina (Angulus) dupliniana Dall. Holotype.
Miocene. Magnolia, Duplin County, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p.
1032, pl. 46, fig. 17.

179. **Tellina equilateralis** Meek and Hayden. Holotype. Fox Hills (Cret.). Mouth of Judith River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 82.

179. Tellina (Peronæa?) equilateralis (Meek and Hayden).

Holotype and paratype.

Fox Hills (Cret.). Mouth of Judith River, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 196, pl. 39, figs. 5a-c.

137391. Tellina (Angulus) eutænia Dall. Holotype. Claibornian (Eocene). Claiborne, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1016, pl. 46, fig. 2.

396. Tellina? formosa Meek and Hayden.

Fox Hills (Cret.). Twenty miles below Cannon Ball

River, on the Missouri, North Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1860, p. 179, = Linearia? formosa.

188. Tellina gracilis Meek and Hayden. Holotype. Fox Hills (Cret.). Mouth of Judith River, Montana.

Meek and Hayden, Proc. Acad. Sci. Phila., VIII, 1856, p. 82.

157856. **Tellina (Merisca?) halidona** Dall. Holotype. Oligocene. Ballast Point, Tampa Bay, Florida.

=Thracia gracilis.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V. 1900. p. 1021, pl. 38, figs 3, 3a.

135704. Tellina (Phyllodina) halistrepta Dall. Holotype. Oligocene. Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1946.
p. 1023, pl. 47, fig. 17.

135696. **Tellina** (**Moerella**) hendersoni Dall. Holotype. Oligocene. Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V. 1995, p. 1024, pl. 46, fig. 5.

157836. Tellina hornii Gabb?

Lower Tejon (Eocene). One mile southeast of Lower Lake, Lake County, California.

Stanton, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. I, 185, p. 1043, pl. 65, fig. 5.

Oligocene. Alum Bluff, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 194
p. 1022, pl. 46, fig. 23.

7851. Tellina? isonema Meek.

Colorado (Cret.). Chalk Creek, above Coalville, Utah.

Mark Port U.S. Coal, Engl. 19th Per. IV. In J. 19

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. 1, 1877, p. 155 pl. 15, fig. 6.—Stanton, Bull. No. 106, U. S. Geol. Surv., 183 p. 113, pl. 25, fig. 8.

Oligocene. Alum Bluff, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., Pt. V, 1900, p. 102 pl. 46, fig. 14.

106923. **Tellina (Phyllodina) lepidota** Dall. Holotype. Oligocene. Near Gatun, Isthmus of Darien.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1022, pl. 46, fig. 18.

Tellina (Angulus) macilenta Dall. Holotype.
 Miocene. Natural Well, Duplin County, North Carolina.
 Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1034, pl. 46, fig. 20.

157848. Tellina (Macaliopsis?) merula Dall. Holotype. Oligocene. Ballast Point, Tampa Bay, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1019, pl. 46, fig. 4.

7852. Tellina modesta Meek? Plesiotype.
Colorado (Cret.). East Canyon Creek, Wasatch Range,
Utah.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 157, pl. 15, fig. 5.

22892. Tellina modesta Meek. Plesiotype. Colorado (Cret.). Coalville, Utah.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 111, pl. 25, fig. 3.

1913. **Tellina nitidula** Meek and Hayden. Holotype and paratype. Montana (Cret.). Deer Creek near North Platte, Wyoming.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1861, p. 443. = Mactra (Cymbophora?) nitidula.

Tellina (Moerella) nucinella Dall. Holotype.
 Oligocene. Oak Grove, Santa Rosa County, Florida.
 Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1026, pl. 46, fig. 19.

135706. **Tellina (Angulus) pharcida** Dall. Holotype. Oligocene. Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1025, pl. 46, fig. 7.

Oligocene. Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1026, pl. 47, fig. 5.

144856. **Tellina (Angulus) propetenella** Dall. Holotype. Miocene. Three miles above Yorktown, Virginia.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1033, pl. 46, fig. 6.

144856. Tellina (Angulus) propeteneri Dall. Holotype

Pliocene. Caloosahatchie River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V. 1995. p. 1035, pl. 47, fig. 7.

189. Tellina prouti Meek and Hayden. Holotype Fox Hills (Cret.). Mouth of Judith River, Montana. Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 8 = Thracia? prouti.

135893. Tellina (Eurytellina) roburina Dall. Holotype Oligocene. Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1624 pl. 47, fig. 9.

146186. Tellina (Eurytellina) scapha Dall. Holotype Miocene. Near Suffolk, Virginia.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 104 pl. 47, fig. 16.

439. Tellina scitula Meek and Hayden. Holotype Fox Hills (Cret.). Moreau River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 2.

439. Tellina (Peronæa?) scitula (Meek and Hayden).

Holotype

Fox Hills (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 197, pl.;
figs. 1a, 1b.

135707. **Tellina** (Scissula) scitula Dall. Holotype Oligocene. Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 102 pl. 47, fig. 15.

135698. Tellina (Merisca) sclera Dall. Holotyn Bowden (Oligocene). Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1:1 pl. 49, fig. 5.

157847. **Tellina segregata** Dall.

Oligocene. Ballast Point, Tampa Bay, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 161-pl. 37, figs. 7, 8.

135697. **Tellina (Moerella) simpsoni** Dall. Holotype. Oligocene. Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 162 pl. 46, fig. 12.

Oligocene. Macdonald's Farm, Calhoun County, Florida Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1015 pl. 47, fig. 11. 441. Tellina subelliptica Meek and Hayden. Holotype and paratypes.

Laramie (Cret.). Cherry Creek, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 83. = Corbicula subelliptica.

157872. Tellina (Moerella) suberis Dall.
Pliocene. Caloosahatchie River, Florida.

Holotype.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900,

p. 1031, pl. 46, fig. 25.

7904. Tellina subscitula Meek. Holotype.

Mentor (Cret.). Twelve miles southwest of Salina,

Meek, Fourth Ann. Rept. U. S. Geol. Surv. Terr., 1871, p. 310; Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 195, pl. 2, figs. 11a, 11b (as T. (Œne?) subscitula).

185. Tellina subtortuosa Meek and Hayden. Holotype. Fox Hills (Cret.). Mouth of Judith River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 272.

= Thracia? subtortuosa.

115042. **Tellina** (Angulus) umbra Dall. Holotype. Miocene. Magnolia, Duplin County, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1033, pl. 46, fig. 13.

46126. Tellinomya cingulata Ulrich.

Kansas.

Holotype.

Richmond (Ord.). Marble Hill, Indiana.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., II, 1879, p. 23, pl. 7, figs. 19, 19a.

= Ctenodonta cingulata.

46128. Tellinomya compressa Ulrich. Holotype.

Black River (Ord.). Five miles south of Cannon Falls,

Minnesota.

Ulrich, Nineteenth Ann. Rept. Geol. and Nat Hist. Surv. Minn., 1892, p. 216, fig. 2.

= Ctenodonta compressa.

17284. Tellinomya contracta (Salter)? Plesiotype. Upper Pogonip (Ord.). Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 76, pl. 11, figs. 15, 15a.

= Ctenodonta contracta.

17286. Tellinomya? hamburgensis Walcott.

Upper Pogonip (Ord.). Ridge east ( Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 188, 1, 1a.

= Ctenodonta hamburgensis.

46134. Tellinomya intermedia Ulrich. Cotypes.

Trenton (Ord.). Near Wykoff, Minnesota.

Ulrich, Nineteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn. 1892, p. 218, fig. 4.

= Ctenodonta intermedia.

46135. Tellinomya longa Ulrich.

Holotype.

Black River (Ord.). Eight miles south of Cannon Falls, Minnesota.

Ulrich, Amer. Geol., X, 1892, p. 103, pl. 7, figs. 17, 18.

=Ctenodonta longa.

46140. Tellinomya nasuta Hall.

Cotype.

Black River (Ord.). Paquettes Rapids, Ottawa River. Canada.

Hall, Tenth Rept. N. Y. State Cab. Nat. Hist., 1857, p. 183, text figs. 1, 3.

=Ctenodonta nasuta robusta.

46141. Tellinomya nitida Ulrich.

Cotypes.

Black River (Ord.). Minneapolis, Minnesota.

Ulrich, Nineteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn., 1892, p. 215, fig. 1.

=Ctenodonta nitida.

46146. Tellinomya planodorsata Ulrich.

Holotype.

Black River (Ord.). Cannon Falls, Minnesota.

Ulrich, Nineteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minn. 1892, p. 217, fig. 3.

=Ctenodonta planodorsata.

15070. Tellinomya protensa Hall.

Holotype.

Upper Carboniferous. Near La Bonté, Laramie County. Wyoming.

Hall, Stansbury's Expl. and Surv. Valley Great Salt Lake, Utal. 1852, p. 412, pl. 2, fig. 3.

46147. Tellinomya recurva Ulrich.

Cotypes.

Ulrich, Nineteenth Ann. Rept. Geol. and Nat. Hist. Surv. Minz.

Richmond (Ord.). Near Spring Valley, Minnesota.

1892, p. 221, fig. 7.

=Ctenodonta recurva.

46152. Tellinomya similis Ulrich.

Cotypes.

Richmond (Ord.). Spring Valley, Minnesota.

Ulrich, Nineteenth Ann. Rept. Geol. and Nat. Hist, Surv. Minn. 1892, p. 220, fig. 6.

=Ctenodonta similis.

46157. Tellinomya subrotunda Ulrich.

Holotype.

Black River (Ord.). Mercer County, Kentucky.

Ulrich, Nineteenth Ann. Rept. Geol, and Nat. Hist. Surv. Minn. 1892, p. 219, fig. 5.

=Ctenodonta subrotunda,

23868. Temnocheilus crassus Hyatt. Holotype. Upper Carboniferous. Near Oswego, Kansas. Hyatt, Second Ann. Rept. Geol. Surv. Tex., 1891, p. 331, text figs. 27-29. 23867. Temnocheilus depressus Hyatt. Holotype. Upper Carboniferous. Near Oswego, Kansas. Hyatt, Second Ann. Rept. Geol. Surv. Tex., 1891, p. 331, text figs. 25, 26. 38119. Tenillus firmus Scudder. Holotype. Florissant (Oligocene). Florissant, Colorado. Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 35, pl. 8, fig. 8. 24313. Tentaculites oseryi Clarke. Cotypes. Middle Devonian. Rio Curua, Brazil. Clarke, Archivos do Mus. Rio de Janeiro, X, 1899, p. 44. 30211. Terebellina palachei Ulrich. Lias? Woody and Pogibshi Islands, Kadiak, Alaska. 30212. Ulrich, Harriman Alaska Exped., IV, 1904, p. 132, pl. 11, figs. 1-7. 113755. Terebra (Acus) amitra Dall. Oligocene. Potrero, River Amina, Santo Domingo, West Indies. Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 39; Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 59, fig. 19. 113653. Terebra (Acus) bipartita Sowerby. Plesiotypes. Ponton, Santo Domingo, West Indies, and Oligocene. 113910. Calhoun County, Florida. Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 38. 113752. Terebra (Acus) bipartita cirrus Dall. Cotypes. Oligocene. River Amina, Santo Domingo, West Indies. Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 38; Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 59, fig. 28. 113756. Terebra (Acus) bipartita oligomitra Dall. Cotypes. Oligocene. River Amina, Santo Domingo, West Indies. Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 38; Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 59, fig. 29. 113654. Terebra (Acus) bipartita spirifera Dall. Oligocene. Ponton, Santo Domingo, West Indies. Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 38; Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 59, fig. 13. - 113912. Terebra (Acus) chir Holotype. Chippola (Olign Florida. Dall, Pr Trans. Wagner Free 1111648. Terebra curvil ₽. Miocene.

Whitfield, Mo.

figs. 14-17.

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- 106952. Terebra (Acus) curvilineata Conrad. Plesiotype.
  111648. Oligocene. Jericho, New Jersey, and Easton, Maryland
  Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 36.
- 106956. Terebra (Acus) curvilirata Conrad. Plesiotypes. 106957. Miocene. St. Marys River, Maryland.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 37.

113124. Terebra (Oxymeris) dislocata indenta Dall. Holotype.

Miocene. Duplin County, North Carolina.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 40; Trans. Wager Free Inst. Sci. Phila., 111, Pt. VI, 1903, pl. 59, fig. 7.

Oligocene. Potrero, River Amina, Santo Domingo, Wes Indies.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 34; Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 59, fig. 31.

Oligocene. Potrero, River Amina, Santo Domingo, Wes

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 35; Trans. Wager Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 59, fig. 30.

6034. Terebra (Hastula) houstonia Harris. Cotype. Eocene. Claiborne, Alabama.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 34.

106953. Terebra (Hastula) inornata Dall.

Cotypes 106954. Oligocene. Shiloh, New Jersey, and St. Marys Rive. 106955. Maryland.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 35.

- Chipola (Oligocene). Calhoun County, Florida.

  Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 39; Trans. Wager Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 59, fig. 27.
- Chipola (Oligocene). Calhoun County, Florida.

  Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 39.
- 11461. Terebra (Acus) neglecta (Emmons).

  Miocene. South Carolina.

  Plesiotyps
  - Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 40.
- 8919. Terebra plicifera Heilprin. Holotype and panty.

  Eocene. Atacosa County, Texas.

  Heilprin, Proc. U. S. Nat. Mus. III, 1880, p.
- 107389. Terebra psilis Dall.
  Oligocene. Oak Grove, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phile. 41, fig. 11. 11873a. Terebra (Acus) sincera Dall.

Cotypes.

Miocene. St. Marys River, Maryland.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 37.

108495. Terebratalia hemphilli Dall.

Holotype.

Pliocene. Santa Barbara, California.

Dall, Proc. U. S. Nat. Mus. XXIV, 1902, pp. 561, 562, pl. 40, figs. 8, 1o.

23021. Terebratella californica Stanton.

Cotypes.

Knoxville (Lower Cret.). Near Stephensons, Tehama County, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 33, pl. 1, figs. 12, 13.

3597. Terebratula amygdala Dana.

Cotypes.

Carboniferous. Black Head, Illawarra, New South Wales, Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 682, Atlas, pl. 1, figs. 2a-2f.

=Dielasma? amygdala.

12548. Terebratula augusta Hall and Whitfield.

Cotypes.

Jurassic. Shoshone Springs; Augusta Mountains, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 285, pl. 7, figs. 7-10.

1124. Terebratula bovidens Morton.

Plesiotypes.

Upper Carboniferous. Indian Creek, Kansas, Rock Bluff 6834. and Plattsmouth, Nebraska. 6943.

Meek, Final Rept. U. S. Geol. Surv. Neb. (Hayden), 1872, p. 187, pl. 1, figs. 7a-7d; pl. 2, figs. 4a, 4b.

= Dielasma bovidens.

8493. Terebratula (Dielasma) bovidens (Morton). Plesiotypes. Upper Carboniferous. Near Santa Fé, New Mexico.

> White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 144, pl. 11, figs. 10a-10c.

=Dielasma bovidens.

8535. Terebratula (Dielasma) burlingtonensis (White).

Plesiotypes.

Lower Carboniferous. Mountain Spring, Old Mormon Road, Nevada.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, P. 93.

115645. Terebratula carneoides Guppy. Holotype. Eocene. San Fernando, Trinidad, British West Indies.

Geol. Soc. London, XXII, 1866, p. 296,

25642. **Terebratula elongata** Schlotheim. Plesiotypes. Carboniferous. District of Illawarra, New South Wales,

Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 682, Atlas, pl. 1, figs. 3a-d.

= Dielasma elongata.

14350. Terebratula hastata Sowerby. Plesiotypes.

Lower Carboniferous. Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 224, pl. 7, figs. 7-7b.

=Dielasma hastata.

12533. Terebratula humboldtensis Gabb.

Cotypes.

Triassic. Near Dun Glen Pass, Pah-Ute Range, Nevada.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 282, pl. 6, figs. 22-24.

115646. Terebratula lecta Guppy.

Holotype.

Eocene. San Fernando, Trinidad, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 296, pl. 19, fig. 3.

9837. Terebratula leonensis Conrad.

Cotypes.

Washita (Lower Cret.). Leon Springs, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 164, pl. 21, fig. 2.

=Kingena leonensis.

5121. Terebratula meridionalis Conrad.

Cotypes.

Jurassic. Cordillera de Dona Ana, Chile.

Conrad, U. S. Naval Ast. Exped. S. Hemisphere, 1855, II, p. 282, pl. 42, fig. 10.

9827. Terebratula mexicana Hall.

Cotypes.

15067. Carboniferous. Texas.

Hall, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, pl. 20, figs. 2a-c.

=Seminula mexicana.

3487. Terebratula nitens Conrad.

Holotype.

Miocene. Astoria, Oregon.

Conrad, Wilkes U. S. Expl. Exped., X, 1849, p. 726, Atlas, pl. 19, figs. 1, a.

8190. Terebratula semisimplex White. Cotypes.

Triassic. Five miles west of John Gray's Lake, South-eastern Idaho.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 108, pl. 31, figs. 3a-c.

17955. Terebratula serpentina de Koninck? Plesiotype. Kinderhook? St. Louis? (Miss.). Skunk River, Iowa.

Owen, Rept. Geol. Surv. Wis., Iowa, and Minn., 1852, pl. 3 A, fig. 13.

=Eumetria vera.

5109. **Terebratula subexcavata** Conrad. Holotype. Jurassic. Cordillera de Dona Ana, Chile.

Conrad, U. S. Naval Ast. Exped. S. Hemisphere, 1855, II, p. 282; pl. 41, fig. 4.

5118. **Terebratula subtetrædra** Conrad. Cotypes. Jurassic. Portezuelo de Mauplas, and Cordillera de Santa Ana, Chile.

Conrad, U. S. Naval Ast. Exped. S. Hemisphere, 1855, II, p. 282, pl. 42, fig. 8.

Eocene. San Fernando, Trinidad, British West Indies.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 296, pl.

17, figs. 1a, 1b.

15239. Terebratula utah Hall and Whitfield. Holotype. Waverly (Miss.). Cottonwood Divide, Wasatch Range, Utah.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II, 1877, p. 258, pl. 4, fig. 18.

= Dielasma utah.

9838. Terebratula wacoensis Roemer. Plesiotypes. Washita (Lower Cret.). Leon Springs, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 147, pl. 3, figs. 1a-c.

= Kingena wacoensis.

138055. Terebratula wilmingtonensis Lyell and Sowerby.

Plesiotypes.

Eccene. Wilmington, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1537, pl. 58, figs. 14-20.

Lower Tejon (Eocene). One mile southeast of Lower Lower Lake (Inty, California.

Rept. U. S. Geol. Surv., Pt. I, 1897,

Holotype.

137

422. Teredo globosa Meek and Hayden. Cotypes.
Fox Hills (Cret.). Fort Clark, on the Missouri, North
Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila. for 1858, p. 53.— Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 264, pl. 30, fig. 13, and text figs. 31, 32.

20107. Teredo pugetensis White. Cotypes.
Puget (Cret.). Carbonado, Washington.
White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 62, pl. 8.

421. Teredo selliformis Meek and Hayden. Paratypes.

Fort Pierre or Fox Hills (Cret.). Fort Clark, Missouri
River, North Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila. for 1860, p. 178; Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 262, pl. 17, fig. 19d.

3481. Teredo substriata Conrad. Holotype. Miocene. Astoria, Oregon.

Conrad, Wilkes U. S. Expl. Exped., X, 1849, p. 728, Atlas, pl. 20, fig. 7.

25479. Teretrum quiescitum Scudder. Holotype.
Older Tertiary. Green River, Wyoming.
Scudder, Mon. XXI, U. S. Geol. Surv., 1893, p. 26, pl. 8, fig. 6.

38140. Termes (?) longitudinalis Scudder. Holotype.
Upper Coal Measures. Mazon Creek, Grundy County,
Illinois.

Scudder, Men. Boston Soc. Nat. Hist., III, 1885, p. 350; Foss. Insects N. America, I, 1890, p. 314.

7526. Tessarolax hitzii White. Holotype and plastotype. Fort Pierre (Cret.). Near Fort Shaw, near Musselshell River, Montana.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 29, pl. 15, fig. 2a.

35063.. Tetracystis chrysalis Schuchert.
Manlius (Sil.). Near Keyser, West Virginia.

Schuchert, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 218, text fig. 5; pl. 34, figs. 9, 19; pl. 40, figs. 1-3.

35091. **Tetracystis fenestratus** (Troost) Schuchert. **Holotype.** Brownsport (Sil.). Decatur County, Tennessee.

Schuchert, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 219, text fig. 26; pl. 34, figs. 6-8.

See Echinomerinites fenestratus.

41385. Tetradella lunatifera (Ulrich). Plesiotypes. Trenton (Ord.). Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 680, text figs. 51a, 51b, pl. 46, figs. 12-14.

41582. Tetradella quadrilirata (Hall and Whitfield). Plesiotypes.

41583. Black River (Ord.). Minneapolis, Minnesota.

Stones River (Ord.). High Bridge, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 678, pl. 46, figs. 1-8.

41584. **Tetradella quadrilirata simplex** (Ulrich). Plesiotype. Black River (Ord.). Fountain, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1894, p. 679, pl. 46, fig. 11.

41384. Tetradella subquadrans Ulrich. Holotype. Trenton (Ord.). Trenton Falls, New York.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 115, text figs. 2a-c.

46011. Tetranota bidorsata (Hall). Plesiotype.
Trenton (Ord.). Near Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 877, pl. 65, figs. 10, 11, 13-18.

46012. **Tetranota bidorsata minor** Ulrich and Scofield. Cotypes. Black River (Ord.). St. Paul, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 878.

46013. **Tetranota macra** Ulrich and Scofield. Holotype. Stones River (Ord.). Minneapolis, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 878, pl. 65, figs. 1, 2.

46014. Tetranota obsoleta Ulrich and Scofield. Cotypes.

46015. Black River (Ord.). Chatfield and Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 880, pl. 65, figs. 19-23.

46016. Tetranota sexcarinata Ulrich and Scofield. Cotypes.

46017. Stones River (Ord.). Dixon, Illinois; Minneapolis, Min-

46018. nesota.

Trenton (Ord.). Wykoff, Minnesota.

'Ilrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 878, pl. 65, figs. 3-9.

46019. **Tetranota wisconsinensis** (Whitfield). Plesiotype. Stones River (Ord.). Minneapolis, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final 1 381, pl. 65, fig. 29.

3366. The Cotypes.

я. 6-bc.

44096. Thamniscus dubius (Schlotheim). Figured sections of plesiotype.

Permian. Poesneck, Germany.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 606, pl. 62, figs. 10, 10a.

43364. Thamniscus furcillatus Ulrich. Cotype. Chester (Miss.) Near Chester, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 609, pl. 62, figs. 9, 9b.

43363. Thamniscus ramulosus Ulrich. Cotypes. Chester (Miss.) Sloans Valley, Kentucky.
Ulrich, Geol. Surv. Ill., VIII, 1890, p. 610, pl. 62, figs. 4-4b.

43801. Thamniscus ramulosus sevillensis Ulrich. Cotypes and figured sections.

Lower Coal Measures. Seville, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 610, pl. 55, fig. 6 (on page

as T. sevillensis).

43365. Thamniscus sculptilis Ulrich. Cotype. Keokuk (Miss.) Kings Mountain, Kentucky.
Ulrich, Geol. Surv. Ill., VIII, 1890, p. 608, pl. 62, figs. 8, 8b.

Thaumastus limnæformis (Meek and Hayden). Holotype and paratypes.

Laramie (Cret.). Opposite mouth of Yellowstone River,

North Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 553, pl. 44, figs. ba-d.

1181. Theca gregaria (Meek and Hayden). Cotypes.
Upper Cambrian. Near head of Powder River, Big Horn
Mountains, Wyoming.

Meek and Hayden, Pal., Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 5, text figs. a-d.

= Hyolithes gregarius.

1181. Theca (Pugiunculus) gregaria Meek and Hayden. Cotypes.
Upper Cambrian. Near head of Powder River, Big Horn
Mountains, Wyoming.

Meck and Hayden, Proc. Acad. Nat. Sci. Phila., for 1861, p. 436; Am. Journ. Sci. (2), XXXIII, 1862, p. 73, fig. 3.

= Hyolithes gregarius.

3621. Theca lanceolata Morris. Plesiotypes.
Carboniferous. Black Head, Illawarra, New South Wales,
Australia.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 708.

= Hyolithes lanceolatus.

155767. Thecodonta? (Dicranodesma) calvertensis Glenn.

Plesiotype.

Miocene. Plum Point, Maryland.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, p. 1157, pl. 45, figs. 23, 24.

337. Thetis? circularis (Meek and Hayden). Holotype and paratypes.

Fort Pierre (Cret.). Near Black Hills on Cheyenne River, South Dakota, and near mouth of Milk River, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 190, pl. 17, figs, 8a-c.

12330. Thetis circularis (Meek and Hayden). Plesiotypes. Fort Pierre (Cret.). Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 417, pl. 11, figs. 22-24.

See Venus? circularis.

211. Thracia? arcuata Meek and Hayden. Holotype. Jurassic. Southwest base of Black Hills, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila. for 1860, p. 182; Pal. Upper Mo., Smithsonian Cont. to Knowl., No. 172, XIV, 1864, p. 102, pl. 4, fig. 8.

107399. Thracia dilleri Dall.

Holotype.

Eocene. Coos Bay, Oregon.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 929, pl. 34, fig. 19; Pt. VI, 1903, p. 1524.

188. Thracia gracilis (Meek and Hayden). Holotype. Fox Hills (Cret.). Mouth of Judith River, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 224, pl. 39, fig. 6b. See Tellina gracillis.

28962. Thracia? montanaensis (Meek). Holotype.

Jurassic. Devil's slide, Cinnabar Mountain, Yellowstone
River, Montana.

Cretaceous. Bell County, Texas.

Stanton, Mon. XXXII, Part II, U. S. Geol. Surv., 1899, p. 628, pl. 73, fig. 10.

[Probably holotype of Corimya montanaensis Meek. T. W. Stanton.]

8029. Thracia myæformis White.

Holotype.

White, Proc. U. S. Nat. Mus., II, 1879, p. 297, pl. 6, figs. 1, 2; Twelftli Ann. Rept. U. S. Geol. Surv. Terr., 1883, p. 23, pl. 17, figs. 2a, b.

189. Thracia? prouti (Meek and Hayden). Holotype. Fox Hills (Cret.). Mouth of Judith River, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 225, pl. 37, figs. 6a, 6b.

See Tellina prouti.

12253. Thracia subgracilis Whitfield. Holotype. Fort Pierre (Cret.). Cheyenne River, near French Creek, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 419, pl. 11, figs. 29, 30.

197. Thracia? sublævis Meek and Hayden. Cotypes.

Jurassic. Southwest base of Black Hills, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila. for 1860, p. 182; Pal. Upper Mo., Smithsonian Contr. to Knowl., No. 172, XIV, 1864, p. 102, pl. 4, figs. 4, 4a.

12327. Thracia? sublevis Meek and Hayden. Plesiotypes.

Jurassic. Redwater Valley, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 375, pl. 5, fig. 34 (fig. 24 in error).

185. Thracia? subtortuosa (Meek and Hayden). Holotype. Fox Hills (Cret.). Mouth of Judith River, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 223, pl. 37, fig. 5. See Tellina subtortuosa.

28943. Thracia weedi Stanton. 28944. Jurassic. Yellowstone National Park. Cotypes.

Stanton, Mon. XXXII, Pt. II, U. S. Geol. Surv., 1899, p. 627, pl. 75, figs. 1-3.

T15424. Thysanus excentricus Duncan. Cotypes.

Miocene. Jamaica, British West Indies.

Duncan, Quart. Journ. Geol. Soc. London, XIX, 1863, p. 439, pl. 16, fig. 3.

38154. **Titanophasma jucunda** Scudder. Holotype. Upper Coal Measures. Near Pittston, Pennsylvania. Scudder, Proc. Amer. Acad. Arts and Sci., XX, 1885, p. 169.

135675. **Tivela jamaicensis** Dall. Holotype. Bowden (Oligocene). Bowden, Jamaica.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1244, pl. 57, fig. 9.

115434. Tornatella textilis Guppy. Holotype. 'Oligocene. Jamaica, British West Indies.

Guppy, Geol. Mag., London, Dec. II, I, 1874, p. 407, pl. 16, fig. 4.

22329. Tornatellina? isoclina White. Cotypes.

Bear River (Cret.). Twenty miles north of Cokeville,

Wyoming.

White, Bull. No. 128, U. S. Geol. Surv., 1895, p. 48, pl. 6, figs. 14, 15.

113871. Tornatina fischeri Dall. Cotypes. Chipola (Oligocene). Chipola River, Florida.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 26; Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 60, fig. 25.

97478. Tornatina (Cylichnella) gabbi Dall. Holotype.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 27.

=Cylichnella gabbi.

113867. **Tornatina incisula** Dall. Cotypes. Oligocene. Calhoun County, Florida.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 25; Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 59, fig. 8.

Tornatina myrmecoön Dall. Cotypes. 113875. Miocene. Natural Well, Duplin County, North Carolina.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 25; Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 59, fig. 18.

Tornatina persimilis Dall. Cotypes. Chipola (Oligocene). Calhoun County, Florida.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 26; Trans. Wagner
 Free Inst. Sci. Phila., III, Pt. VI, 1903 pl. 59, fig. 22.

8163. Tortacella haldemani (White). Cotypes and plesiotypes.
23117. Bear River (Cret.). Twenty miles north of Cokeville,
Wyoming.

White, Bull. No. 128, U. S. Geol. Surv., 1895, p. 44, pl. 5, figs. 8-12.

See Acella haldemani.

9856. Toxaster elegans (Shumard). Plesiotypes. Washita (Lower Cret.). Eagle Spring, Texas.

Hall, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 146, pl. 21, figs. 1a-e.

=Epiaster whitei.

9857. Toxaster texanus Roemer. Plesiotype.

Fredericksburg (Lower Cret.). Leon Springs, Texas.

Hall, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 145, pl. 1, figs. 2a-c.

=Enallaster texanus.

12529. **Trachyceras judicaricum** Mojsisovics. Plesiotypes. Triassic. Cottonwood Canyon, West Humboldt Range, Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 118, pl. 11, figs. 1, a.

20223. Trachyceras judicaricum subasperum Meek. Holotype.
Triassic. Cottonwood Canyon, West Humboldt Range,
Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 118, pl. 11, figs. 2-2b.

12527. Trachyceras whitneyi (Gabb). Plesiotype.
Triassic. Cottonwood Canyon, West Humboldt Range,
Nevada.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p, 116, pl. 11, figs. 3, a.

261. Trachytriton vinculum (Hall and Meek). Plesiotypes.
Fort Pierre (Cret.). Great Bend of Missouri River, South
Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 304, pl. 19, figs. 7a-d.

109231. Transennella caloosana Dall. Holotype.

Pliocene. Caloosahatchie, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1242, pl. 57, fig. 2.

115165. Transennella carolinensis Dall. Holotype.

Miocene. Natural Well, Duplin County, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1242, pl. 55, fig. 4.

109230. Transennella chipolana Dall. Holotype. Chipola (Oligocene). McDonald's ranch, Chipola River,

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1241, pl. 57, fig. 6.

135890. Transennella santarosana Dall. Holotype.

Oligocene. Oak Grove, Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1241, pl. 57, fig. 13.

114590. Transennella utica Dall. Holotype.

Chipola (Oligocene). McDonald's ranch, Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, p. 1240, pl. 57, fig. 12.

12303. Trapezium bellefourchensis Whitfield. Cotypes.

Jurassic. East of Belle Fourche River, near Bear Lodge Butte, Black Hills, South Dakota.

Whitfield, Rept. Gool. and Resources, Black Hills Dakota, 1880, p. 364, pl. 5, figs. 1-4.

107794. **Trapezium claibornense** Dall. Holotype. Claibornian (Eocene). Claiborne, Alabama.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. V, 1900, pl. 43, figs. 9, 10; Pt. VI, 1903, p. 1498.

7846. Trapezium micronema Meek. Holotype.

Colorado (Cret.). Sulphur Creek, Bear River City, Wyo-ming.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 493.— White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879, p. 293, pl. 10, fig. 5a.

= Barbatia micronema.

12317. Trapezium subequalis Whitfield. Cotypes.

12329. Jurassic. Red Canyon Creek, Black Hills, South Dakota.

Whitfield, Rept. Geol. and Resources Black Hills Dakota, 1880, p. 365, pl. 5, figs. 5-8.

7813. Trapezium truncatum (Meek). Cotypes.

Cretaceous. Salt Lake, Utah.

White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879, p. 292, pl. 10, figs. 6a, 6b.

See Pachymya? truncata.

44999. **Trematis crassipuncta** Ulrich. Plastotype. Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Amer. Geol., III, 1889, p. 378, fig. 7; ibid., IV, 1889, p. 22.

45199. Trematis oblata Ulrich.

Cotype.

Utica (Ord.). Covington, Kentucky.

Ulrich, Amer. Geol., III, 1889, p. 378, fig. 9b; ibid., IV, 1889, p. 23.

45200. Trematis oblata Ulrich.

Plastotype.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Amer. Geol., III, 1889, p. 378, figs. 9, 9a; ibid., IV, 1889, p. 23.

15331. Trematis pannulus White.

Holotype.

Lower Cambrian. Pioche, Nevada.

White, Prelim. Rept. U. S. Geogr. Surv. W. 100th Merid., 1874,
8vo., p. 6; Rept. U. S. Geogr. Surv. W. 100th Merid., IV,
Pt. I, 1877, p. 36, pl. 1, figs. 4a, 4b.

=Iphidea pannula. See Kutorgina pannula.

44993. Trematis umbonata Ulrich.

Plastotype.

Lorraine (Ord.). Cincinnati, Ohio.

Ulrich, Amer. Geol., III, 1889, p. 378, fig. 8; ibid., IV, 1889, p. 23.

43803. Trematopora calloporoides Ulrich. Cotype and figured sections.

Cincinnatian (Ord.). Alexander County, Illinois.

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 420, pl. 38, figs. 1b, 1c, 1d.

43802. Trematopora debilis Ulrich. Figured sections and fragment of holotype. Cincinnatian (Ord.). Alexander County, Illinois. Ulrich, Geol. Surv. Ill., VIII, 1890, p. 419, pl. 34, figs. 3c, 3d.

44107. Trematopora halli Ulrich. Cotypes. Niagaran (Sil.). Waldron, Indiana.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., VI, 1883, p. 261, pl. 13, figs. 3, 3a.

43778. Trematopora? nitida Ulrich. Cotypes and figured sections. Richmond (Ord.). Four miles north of Fayville, Illinois (Savannah, Illinois, in error).

Ulrich, Geol. Surv. Ill., VIII, 1890, p. 419, pl. 34. = Lioclemella nitida.

43615. Trematopora? primigenia Ulrich.

Black River (Ord.). Minneapolis, Min. Ulrich, Geol. and Nat. Hist. Surv. Minn., Fi 1893, p. 309, pl. 21, figs. 23-40.

12452. Trigonia evansana Meek. Holotype

Nanaimo (Cret.). Nanaimo, Vancouver Island.

Meek, Trans. Albany Inst., IV, 1857, p. 42.

See Trigonia evansi.

7529. Trigonia evansi Meek. Cotype

12452. Nanaimo (Cret.). Nanaimo, Vancouver Island.

Meek, Bull. U. S. Geol. and Geogr. Surv. Terr., II, 1876, p. 35 pl. 2, figs. 7, 7a.

=Trigonia evansana.

3581. Trigonia lorentii Dana. Holotyp Jurassic. San Lorenzo, Peru, South America.

Dana, Wilkes U. S. Expl. Exped., X, 1849, p. 721, pl. 15, fg 2a, 2c.

7817. Trigonia montanaensis Meek.

Holotype

Jurassic. Near Lower Canyon of the Yellowstone River Montana.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. 1, 189 p. 147, pl. 38, fig. 2.

12537. Trigonia quadrangularis Hall and Whitfield. Holotype Jurassic. Near Como, Laramie Plains, Wyoming.

Hall and Whitfield, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. II 1877, p. 293, pl. 7, fig. 22.

9843. Trigonia texana Conrad. Holotype

Fredericksburg (Lower Cret.). Leon Springs, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 189 p. 148, pl. 3, figs. 3a-c.

=Cyprina? texana.

43596. Trigonodictya conciliatrix Ulrich. Cotypes and figure sections

Black River (Ord.). Cannon Falls, Minnesota.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III. Pt i 1893, p. 160, pl. 9, figs. 11, 12; pl. 10, figs. 15-20.

43595. Trigonodictya eatonensis Ulrich. Cotype

Clinton (Sil.). Near Eaton, Ohio.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, F. 1893, p. 160.

112090. Trigonostoma subthomasiæ Dall. Cotype

Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. pl. 11, fig. 3.

97356. Trigonostoma tenera Philippi. Plesiotype.
Pliocene. Caloosahatchie River, near Fort Thomas

Pliocene. Caloosahatchie River, near Fort Thompson Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1899, p. pl. 10, fig. 8.

7801. Trimerella ohioensis Meek. Holotype.

Niagara (Sil.). Genoa, Ottawa County, Ohio.

Meek, Amer. Journ. Sci. (3), I, 1871, p. 305; Pal. Ohio, I, 1873, p. 183, pl. 16, figs. 1a-1d.

35064. Trimerocystis peculiaris Schuchert. Holotype. Manlius (Sil.). Near Keyser, West Virginia.

Schuchert, Smithsonian Misc. Coll., Quart., XLVII, 1904, pp. 239, 240, text fig. 34; pl. 35, figs. 1-3.

4910. Trimerus delphinocephalus Green. Plastotype.

Niagara (Sil.). Williamsville, New York.

Green, Mon. Trilobites N. America, Phila., 1832, p. 82. Cast No. 32.

=Homalonotus delphinocephalus.

4885. Trimerus jacksonii Green. Plastotype.

Hamilton (Dev.). Huntington County, Pennsylvania.

Green, Amer. Journ. Sci., XXXII, 1837, p. 347. Cast No. 51.

= Homalonotus jacksoni.

135824. Trinacria meekii Dall. Holotype.
Oligocene. Santa Rosa County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 604, pl. 32, fig. 17.

41876. Trinucleus bellulus Ulrich. Holotype.

Utica (Ord.). Covington, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., I, 1878, p. 99, pl. 4 fig. 15.

45545. **Triplecia ulrichi** Winchell and Schuchert. Cotypes. Maquoketa (Ord.). Wykoff, Minnesota.

Winchell and Schuchert, Geol. and Nat. IIist. Surv. Minn., Final Rept., III, Pt. I, 1893, p. 409, figs. 34-a-e.

17279. Triplesia calcifera (Billings). Plesiotypes.

17281. Lower Pogonip (Cambrian). Eureka District, Nevada.

Walcott, Mon. VIII, U. S. Geol. Surv., 1884, p. 75, pl. 11, figs. 7, 8.

=Syntrophia calcifera.

35146. Tripleurocrinus levis Wood. Holotype.

Onondaga (Dev.). Le Roy, New York.

Wood, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 57, pl. 16, figs. 2, 2a.

46529. Triptoceras planodorsatum Whitfield. Plesiotype. Stones River (Ord.). Minneapolis, Minnesota.

Clarke, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, F II, 1897, p. 792, pl. 56, fig. 4.

111634. Tritia bidentata (Emmons). Plesiotype.

Miocene. Shiloh, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 106, pl. 19, fig. 7.

111632. Tritia trivittatoides Whitfield.

Cotypes.

Miocene. Shiloh, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 104, pl. 19, figs. 1-3.

116644. Tritia trivittatoides elongata Whitfield.

Cotypes.

Miocene. Shiloh, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 105, pl. 19, figs. 4-6.

27910. Triticites secalicus (Say). Plesiotypes.
Upper Carboniferous. Platte River, near junction with
Missouri.

Girty, Amer. Journ. Sci. (4), XVII, 1904, pp. 234-240, text figs. 1-5.

22920. Tritonidea? huerfanensis Stanton.

Holotype.

Colorado (Cret.). Poison Canyon, Huerfano Park, Colorado.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 152, pl. 31, fig. 15.

112055. Tritonidea pauper Dall.

Cotypes

Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 129, pl. 4, fig. 8c.

22919. Tritonium kanabense Stanton.
Colorado (Cret.). Upper Kanab Valley, Utah.

Holotype.

Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 150, pl. 31 fig. 12.

164868. Trochita alaskana Dall.

Cotype

Miocene. Popof Island, Shumagins, Alaska.

Dall, Harriman Alaska Exped., IV, 1904, pl. 10, figs. 2, 6.

13310. Trochita costellata Conrad.

Cotype

Miocene. Gaviote Pass, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Octat VII, 1857, p. 195, pl. 7, fig. 3.

=Calyptræa costellata.

111654. Trochita perarmata (Conrad).

Plesiotyx

Miocene. Shiloh and Jericho, New Jersey.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 124, pl. 3 figs. 15-19.

156934. Trochocyathus californianus Vaughan.

Cotype

Eocene? Southern California.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 96.

158161. **Trochocyathus cingulatus** Vaughan. Holotype. Chickasawan or Midwayan (Eocene). Prairie Creek, Wilcox County, Alabama.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 99, pl. 7, figs. 19, 19b.

158159. Trochocyathus depressus Vaughan. Cotypes.
Lower Claibornian (Eocene). Six miles west of De Soto,
Clarke County, Mississippi.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 97, pl. 7, figs. 14-17.

158134. Trochocyathus hyatti Vaughan. Cotypes.

158135. Sucarnochee (Eocene). Black Bluff, Alabama.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 93, pl. 6, figs. 19-21; pl. 7, fig. 1.

158145. **Trochocyathus lunulitiformis** (Conrad). Plesiotypes. 158146. Jacksonian (Eocene). Jackson, Mississippi, and Montgomery, Louisiana.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 94, pl. 7, figs. 2-3.

158152 Trochocyathus lunulitiformis montgomeriensis Vaughan. to Cotypes.

158155. Jacksonian (Eocene). Montgomery, Louisiana.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 94, pl. 7, figs. 4, 5-8, 9.

158158. **Trochocyathus stantoni** Vaughan. Holotype. Upper Tejon (Eocene). Northeast of Clayton, Contra Costa County, California.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 98, pl. 7, figs. 18, 18a.

158165. **Trochocyathus striatus** (Gabb). Plesiotypes. 158167. Upper Tejon (Eocene). Near Clayton, Contra Costa County, California.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 101, pl. 7, fig. 24; pl. 8, figs. 1-3.

158169. Trochocyathus zitteli (Merriam ms.) Vaughan. Cotypes. Martinez (Eocene). Martinez, California.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 102, pl. 8, figs. 4-7.

25659. Trocholitoceras walcotti Hyatt. Holotype. Beekmantown (Ord.). Fort Cassin, Vermont.

Hyatt, Proc. Amer. Phil. Soc., XXXII, 1894, p. 480, pl. 6, figs. 12-19.

46021. **Trochonema altum** Ulrich and Scofield. Holotype. Trenton (Ord.). Cannon Falls, **Minne** 

Ulrich, Geol. and Nat. Hist. Surv. Min 1897, p. 1052, pl. 77, figs. 39-41. 46022. Trochonema arctatum Ulrich. Holotype.

Trenton (Ord.). Near Burgin, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II. 1897, p. 1054, pl. 76, figs. 9, 10.

46023. Trochonema beachi Whitfield? Plesiotypes.

46024. Stones River (Ord.). Minneapolis, Minnesota; Janesville.

46025. Wisconsin; Dixon, Illinois.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1048, pl. 77, figs. 9-12.

46076. Trochonema bellulum Ulrich. Holotype.

Stones River (Ord.). Murfreesboro, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1050, pl. 77, figs. 26-29.

46026. Trochonema beloitense Whitfield. Plesiotypes.

46027. Stones River (Ord.). Beloit and Mineral Point, Wisconsin.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept.,

III, Pt. II, 1897, p. 1048, pl. 78, figs. 1-9.

46077. Trochonema eccentricum Ulrich. Holotype. Stones River (Ord.). Near Lebanon, Tennessee.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1049, pl. 77, figs. 19-22.

46028. Trochonema fragile Ulrich and Scofield. Cotypes.

46029. Trenton (Ord.). Cannon Falls, Minnesota; Carroll County, Illinois.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept. III, Pt. II, 1897, p. 1050, pl. 77, figs. 13-16.

46030. Trochonema madisonense Ulrich. Holotype Richmond (Ord.). Madison, Indiana.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1051, pl. 77, figs. 23-25.

46031. Trochonema niota (Hall). Plesiotype.

Stones River (Ord.). Beloit, Wisconsin.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept. III, Pt. II, 1897, pl. 76, figs. 16-18.

46032. Trochonema (Eunema) nitidum Ulrich.

Utica (Ord.). Covington, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III. Pt. II. 1897, p. 1053, pl. 77, figs. 44, 45.

46033. Trochonema (Eunema) obsoletum Ulrich.

Trenton (Ord.). Near Burgin, Kentucky.

Ulrich, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II 1897, p. 1054, pl. 76, figs. 6-8.

46034. Trochonema retrorsum Ulrich and Scofield. Holotype Black River (Ord.). Goodhue County, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rep. III, Pt. II, 1897, p. 1051, pl. 77, figs. 35-38.

46035. Trochonema (Eunema) robbinsi Ulrich and Scofield.,
Cotype.

Trenton (Ord.). Wykoff, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1053, pl. 76, figs. 11-15.

46036. **Trochonema rugosum** Ulrich and Scofield. Cotypes. Stones River (Ord.). Minneapolis, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1049, pl. 77, figs. 19–22.

46037. Trochonema (Eunema) salteri Ulrich and Scofield.

Holotype.

Trenton (Ord.). Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1053, pl. 77, figs. 42, 43.

46038. **Trochonema** (**Eunema**) simile Ulrich and Scofield. Cotypes. Trenton (Ord.). Wykoff, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1053.

46039. Trochonema subcrassum Ulrich and Scofield. Cotypes. Trenton (Ord.). Mercer County, Kentucky.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1051, pl. 77, figs. 30-34.

46040. Trochonema umbilicatum (Hall). Plesiotypes.

46041. Trenton (Ord.). Hader and Stewartville, Minnesota, 46042. and near Galena, Illinois.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1047, pl. 77, figs. 1-3.

46043. Trochonema umbilicatum canadense Ulrich and Scofield.
Holotype.

Black River (Ord.). Paquettes Rapids, Ottawa River, Canada.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1047, pl. 77, figs. 4-6.

46044. Trochonema umbilicatum latum Ulrich and Scofield.

Holotype.

Stones River (Ord.). Tennessee.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 1047, pl. 77, figs. 7, 8.

46045. Trochonema vagrans Ulrich and Scofield. Cotyn Stones River (Ord.). Minneapolis, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., F III, Pt. II, 1897, p. 1049, pl. 77, fig. 46; pl. 78, fi

115618. Trochus decipiens Guppy.

Pliocene. Matura, Trinidad, British West In Guppy, Geol. Mag., London, Dec. II, 1, 1874, p. 435.

- Trochus (Oxystele) euryostomus White. Cotypes. Chico (Cret.). Todos Santos Bay, California.
  - White, Bull. No. 22, U. S. Geol. Surv., 1885, p. 12, pl. 5, figs. 9-11.
- 20120. Trochus (Anadema) gemiferus White. Holotype. Chico (Cret.). Near Pence's ranch, Butte County, California.

White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 17, pl. 4, figs. 8, 9.

- 2468. Trochus humilis Conrad. Holotype. Miocene. St. Marys River, Maryland.
  - Conrad, Journ. Acad. Nat. Sci. Phila., VI, 1830, p. 219, pl. 9. fig. 5.—Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 405.
  - =Calliostoma (Eutrochus) humilis.
- 115617. Trochus plicomphalus Guppy. Holotype.
  Pliocene. Matura, Trinidad, British West Indies.
  Guppy, Geol. Mag., London, Dec. II, I, 1874, p. 435, pl. 18, fig. 17.
  - 14988. Trochus (Palæotrochus) præcursor Clarke. Holotype.
    Naples (Dev.). Naples, New York.
    Clarke, Bull. No. 16, U. S. Geol. Surv., 1885, p. 55, pl. 3, figs. 6-9.
    = Palæotrochus præcursor.
- 23847. Trochus? saratogensis Walcott. Cotypes.

  Upper Cambrian. Four miles west of Saratoga Springs,
  New York.

Walcott, Proc. U. S. Nat. Mus., XIII, 1890, p. 268, pl. 20, fig. 3.

- 162545. Trophon (Boreotrophon) cerritensis Arnold. Holotype. Pleistocene. Deadman Island, off San Pedro, California. Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 249, pl. 6, fig. 6.
- 20122. Trophon condoni White. Cotype. Chico (Cret.). Eighteen miles east of Redding, California. White, Bull. No. 51, U. S. Geol. Surv., 1889, p. 21, pl. 3, figs. 4, 5.
- Trophon (Aspella) engonatus Dall. Cotypes.
  Pliocene. Shell Creek, De Soto County, Florida.

  Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 243.
  pl. 13, fig. 6a.
- 162546. Trophon (Boreotrophon) stuarti præcursor Arnold.
  Holotype.
  Pliocene. Deadman Island, off San Pedro, California.
  Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 253, pl. 6, fig. 5.
- 24340. Tropidocyclus gilletianus (Hartt and Rathbun).

  Plesiotypes.

  Middle Devonian. Ereré, Brazil.

  Clarke, Archivos do Mus. Rio de Janeiro, X, 1899, p. 40, pl. 3.

figs. 10, 11.

46046. Tryblidium modestum Ulrich and Scofield. Holotype. Black River (Ord.). Near Cannon Falls, Minnesota.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 826, pl. 82, figs. 1, 2.

46047. Tryblidium unguis Lindström.

Plesiotype.

Silurian. Island of Gotland.

Ulrich and Scofield, Geol. and Nat. Hist. Surv. Minn., Final Rept., III, Pt. II, 1897, p. 820, figs. 1b, 1c.

113472. Tuba acutissima Dall.

Cotypes.

Oligocene. Alum Bluff, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 319, pl. 18, fig. 4a.

9073. Tubulostium dickhauti (White).

Cotypes.

135149. Tertiary. Little Rock, Arkansas.

White, Proc. U. S. Nat. Mus., IV, 1881, p. 138, pl. 1, figs. 12, 13.— Harris, Ann. Rept. Geol. Surv. Arkansas, 1872, II, p. 47, pl. 3, fig. 4.

See Spirorbis? dickhauti.

115014. Tugoniopsis compacta Dall.

Holotype.

Miocene. Magnolia, Duplin County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 860, pl. 35, fig. 10.

9026. Tulotoma thompsoni White.

Cotypes.

Laramie (Cret.). Black Buttes Station, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 100, pl. 28, figs. 2a-h; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 467, pl. 24, figs. 17-22.

158479 **Turbinaria? alabamensis** Vaughan. Cotypes. to Jacksonian or Lowest Oligocene. Salt Mountain, near 158482. Jackson, Alabama.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 194, pl. 23, figs. 1-3; pl. 24.

Oligocene. Near Baileys Ferry, Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 97, pl. 10, fig. 7.

111936. Turbinella regina Heilprin. Plesioty

Pliocene. Shell Creek, De Soto County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p pl. 3, fig. 4.

111924. Turbinella scolymoides Dall. Holotype and plesiotype...
112388. Pliocene. Caloosahatchie River, near Fort Thompson. and Shell Creek, De Soto County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. pl. 3, figs. 2, 5; Pt. II, 1892, p. 229.

158131. Turbinolia acuticostata Vaughan. Paratype. Pamunky (Eocene). Potomac Creek, Maryland.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 89, pl. 6, fig. 13b.

158120. Turbinolia claibornensis Vaughan. Cotypes.

158121. Claibornian (Eocene). Claiborne, Alabama.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 90, pl. 6, figs. 14-16b.

158130. Turbinolia insignifica Vaughan. Cotypes.

Red Bluff (Oligocene). Red Bluff, and near Shubuta,

Mississippi.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 91, pl. 6, figs. 17-18.

157514. Turbinolia pharetra Lea. Plesiotypes.

158097 Claibornian and Jacksonian (Eocene). Claiborne, Alato bama, Montgomery, Louisiana, and Whitlock, Texas.

158099. Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 86, pl. 6, 158101. figs. 5-10.

155206. Turbinolia sulcata Lamarck. Plesiotype. Eocene. Launay, France.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 87, pl. 6, fig. 4.

9836. Turbinolia texana Conrad. Cotypes.
Washita (Lower Cret.). Between El Paso and Frontera,
Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857, p. 144, pl. 2, figs. 3a, b.

158126. Turbinolia wautubbeensis Vaughan.

158127. Holotype and paratype.
Lower Claibornian (Eocene). Wautubbee, Mississippi,
and Bienville Parish, Louisiana.

Vaughan, Mon. XXXIX, U. S. Geol. Surv., 1900, p. 88, pl. 6, figs. 11, 12.

23070. Turbo colusaensis Stanton. Cotypes.

Knoxville (Lower Cret.). Near Wilbur Springs, Colusa
County, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 66, pl. 12, fig. 14.

23072. Turbo? humerosus Stanton. Cotypes.

23073. Knoxville (Lower Cret.). Three miles north of Lowerys, Tehama County, California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 67, pl. 12, figs. 10, 11.

23071. Turbo morganensis Stanton.

Knoxville (Lower Cret.). Morgan Valley, Lake County,
California.

Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 66, pl. 12, fig. 13.

7903. Turbo mudgeanus Meek. Cotypes. Mentor (Cret.). Twelve miles southwest of Salina, Kansas. Meek, Fourth Ann. Rept. U. S. Geol. Surv. Terr., 1871, p. 313. = Margarita mudgeana. 294. Turbo nebrascensis Meek and Hayden. Holotype and para-Yellowstone River, near Miles City, Montana (Cret.). Montana. Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 64. = Margarita nebrascensis. 23067. Turbo paskentaensis Stanton. Cotypes. Knoxville (Lower Cret.). Three miles northwest of Paskenta, California. Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 64, pl. 12, figs. 5, 6. 112987. Turbo rhectogrammicus Dall. Cotypes. Pliocene. Caloosahatchie River, near Fort Thompson, Florida. Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 383, pl. 18, figs. 8a, 11. 270. Turbo tenuilineatus Meek and Hayden. Holotype. Fox Hills (Cret.). Moreau River, South Dakota. Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 64. =Spironema tenuilineata. 23069. Turbo trilineatus Stanton. Holotype. Knoxville (Lower Cret.). Three miles north of Lowerys, Tehama County, California. Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 65, pl. 12, fig. 12. 23068. Turbo wilburensis Stanton. Cotypes. Knoxville (Lower Cret.). Near Wilbur Springs, Colusa County, California. Stanton, Bull. No. 133, U. S. Geol. Surv., 1895 (Feb., 1896), p. 65, pl. 12, fig. 15. 160483. Turbonilla (Pyrgolampros) alderi Dall and Bartsch. Holotype Post-Pliocene. Deadman Island, off San Pedro, California. Dall and Bartsch in Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 280, pl. 1, fig. 9. 107115. Turbonilla angulata Guppy. Holotype. Oligocene. Vendrue Jamaica, West Indies. **96, p. 316, pl. 28, fig. 10.** Guppy, Pr d Bartsch. 160194. Turbonilla (1 Holotype. 'alifornia. Post-Plic ~~..B. Dall at

23232-05-

Oligocene. Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 258.

7880. Turbonilla (Chemnitzia?) coalvillensis Meek. Cotypes. Colorado (Cret.). Coalville, Utah.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 505.— White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879, p. 305, pl. 9, figs. 5a-5b.

112376. Turbonilla (Ondina) fragilis Dall. Holotype.
Pliocene. Waccamaw River, South Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 253, pl. 20, fig. 5.

162608. Turbonilla (Pyrgiscus) latifundia Dall and Bartsch.

Holotype.

Post-Pliocene. San Pedro, California.

Dall and Bartsch in Arnold, Mem. Calif. Acad. Sci., III, 1903, p. 275, pl. 3, figs. 5, 5a.

8655. Turbonilla (Chemnitzia) melanopsis Conrad? Plesiotypes. Colorado. (Cret.). West crossing of Virgin River, Utah. White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876. p. 197, pl. 18, fig. 10a.

[Not Turbonilla melanopsis Conrad,—T. W. Stanton.]

Turbonilla (Stylopsis) octona Guppy. Holotype.
Upper Oligocene. Pointapier, Trinidad, West Indies.
Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 317, pl. 27, fig. 8.

Turbonilla plastica Guppy. Holotype.
Upper Oligocene. Pointapier, Trinidad, West Indies.
Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 316, pl. 28, fig. 4.

113251. Turbonilla protracta Dall. Cotypes.

Miocene. Cape Fear River, North Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892. p. 261, pl. 13, fig. 11a.

Turbonilla puncta obsoleta Dall.

Pliocene. Caloosahatchie River, near Fort

Florida.

Holotype.

Thompson.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II 1892. p. 256.

Oligocene. Vendryes, Jamaica, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 317, pl. 28, fig. 1.

148599. Turbonilla (Strioturbonilla) stearnsii Dall and Bartsch.
Holotyp

Post-Pliocene. San Diego, California.

Dall and Bartsch in Arnold, Mem. Cal. Acad. Sci., III, 99, p. 271, pl. 2, figs. 5, 5a.

107117. Turbonilla tenuilineata Guppy. Holotype. Oligocene. Vendryes, Jamaica, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 317, pl. 28, fig. 8.

115440. Turbonilla turris Orbigny. Plesiotypes.
Pliocene. Matura, Trinidad, British West Indies.
Guppy, Geol. Mag., London, Dec. II, I, 1874, p. 407, pl. 18, fig. 15.

Oligocene. Vendryes, Jamaica, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 316, pl. 28, fig. 5.

451. Turnus (Goniochasma) stimpsoni (Meek and Hayden).

Holotype and paratype. Fort Pierre (Cret.). Musselshell River, Montana.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 256, pl. 30, figs. 9a, 9b.

See Xylophaga stimpsoni.

472. Turrilites ? umbilicatus Meek and Hayden. Holotype.
Fort Pierre (Cret.). Great Bend of Missouri River, below
Fort Pierre, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1858, p. 56. = Heteroceras? umbilicatum.

271. Turris (Surcula?) contortus (Meek and Hayden). Holotype and paratypes.

Fox Hills (Cret.). Moreau River, South Dakota.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 385, pl. 31, figs. 7a-c, and text fig. 49.

See Fusus contortus.

12458. Turris (Surcula?) hitzi Meek. Holotype.
Fort Benton (Cret.). Opposite Fort Shea, Upper Missouri River.

Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 386, text fig. 50, p. 387.

111655. Turritella æquistriata Conrad.

Miocene. Jericho, New Jersey.

Plesiotype.

Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 128, pl. 23, figs. 12-14.

135054. Turritella alcida Dall. Cotypes.

Alum Bluff (Oligocene). Oak Grove, Santa Rosa County, and Rock Bluff, Appalachicola River, Florida.

Dall, Proc. U. S. Nat. Mrs. 50, fig. 23; Trans. Wagner Free Inst. Sci. Pi 50, fig. 26.

113464. Turritella apicalis F Pliocene. Calo Florida. iotypes.

Dall, Trans. Was pl. 16, fig. 10.

113468. Turritella apicalis cingulata (Heilprin). Plesiotype. Pliocene. Shell Creek, De Soto County, Florida.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 317. pl. 16, fig. 11.

113463. Turritella apicalis mediosulcata (Heilprin). Plesiotypes. Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 317, pl. 16, fig. 12.

113461. Turritella apicalis tensa Dall. Holotype. Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 317, pl. 16, fig. 13.

107085. Turritella arata Guppy. Holotype. Oligocene. Haiti, West Indies.

Guppy, Proc. U. S. Nat. Mus., XIX, 1896, p. 319, pl. 28, fig. 3.

135141. Turritella arenicola branneri Harris. Holotype. Eocene. White Bluff, Arkansas River, Arkansas.

Harris, Ann. Rept. Geol. Surv. Arkansas, II, 1894, p. 169, pl. 6, fig. 7.

30240. Turritella budaensis Shattuck. Cotypes. Buda (Lower Cret.). Near Austin, Texas.

> Shattuck, Bull. No. 205, U. S. Geol. Surv., 1903, p. 31, pl. 19, figs. 4, 6.

113442. Turritella chipolana Dall. Holotype. Oligocene. Calhoun County, Florida.

> Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 312, pl. 22, fig. 24.

135142. Turritella clevelandia Harris. Holotype. Eocene. White Bluff, Arkansas River, Arkansas.

> Harris, Ann. Rept. Geol. Surv. Arkansas, II, 1894, p. 170, pl. 6, fig. 9.

7878. Turritella coalvillensis Meek. Cotypes.

Colorado (Cret.). Coalville, Utah.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 502.— White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879. p. 315, pl. 9, fig. 4a.

=Glauconia coalvillensis.

111659. Turritella cumberlandia Conrad. Plesiotype. Miocene. Shiloh, New Jersey.

> Whitfield, Mon. XXIV, U. S. Geol. Surv., 1894, p. 129, pl. 23, figs. 9-11.

112591. Turritella gatunensis Conrad. Plesiotypes. Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1802, p. 310, pl. 17, fig. 10.

112589. Turritella indenta martinensis Dall. Cotypes. Vicksburgian (Eocene). Martin Station, Hernando County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p.

113476. Turritella indenta mixta Dall. Cotypes. Oligocene. Near Baileys Ferry, Chipola River, Florida. Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p.

13344. Turritella inezana Conrad. Cotype. Miocene. Santa Inez Mountains, Santa Barbara County, California.

> Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 195.

157835. Turritella infragranulata (Gabb). Plesiotype. Lower Tejon (Eocene). One mile north of Pacheco, California.

> Stanton, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. I, 1897, p. 1044, pl. 66, fig. 3.

9845. Turritella irrorata Conrad. Holotype. Cretaceous. Between El Paso and Frontera, Texas. Conrad, Proc. Acad. Nat. Sci. Phila., VII, 1855, p. 268. See Turritella planilateris.

7899. Turritella kansasensis Meek. Cotypes. Mentor (Cret.). Twelve miles southwest of Salina,

> Meek, Fourth Ann. Rept. U. S. Geol. Surv. Terr., 1871, p. 312. = Mesalia? kansasensis.

9834. Turritella leonensis Conrad. Holotype. Washita (Lower Cret.). Leon Springs, Texas. Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II,

1857, p. 165, pl. 21, figs. 7a, 7b.

pl. 7, figs. 5a, 5b.

8055. Turritella marnochi White. Cotypes. Washita (Lower Cret.). Helotes, Bexar County, Texas. White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879, p. 314,

112596. Turritella megalobasis Dall. Holotype. Oligocene. Ballast Point, Tampa, Florida Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 310, pl. 17, fig. 11.

22908. Turritella micron Plesiotype. Colorado (Cret Stanton, Br

J. 29, Eg. 3.

7882. Turritella (Aclis?) micronema Meek. Cotypes. Colorado (Cret.). Coalville, Utah.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 504.— White, Eleventh Ann. Rept. U. S. Geol. Surv. Terr., 1879, p. 316, pl. 9, fig. 8a.

293. Turritella moreauensis Meek and Hayden. Holotype. Fox Hills (Cret.). Moreau River, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 70. = Cerithiopsis moreauensis.

135153. Turritella mortoni Conrad, var. Plesiotype. Midwayan (Eocene). Near Bradford, Arkansas.

Harris, Ann. Rept. Geol. Surv. Arkansas, II, 1894, p. 48, pl. 3, fig. 5.

157843. Turritella pachecoensis Stanton. Cotypes.

Lower Tejon (Eocene). One mile north of Pacheco,
California.

Stanton, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. I, 1897, p. 1043, pl. 66, figs. I, 2.

113459. Turritella perattenuata Heilprin. Cotypes.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 316, pl. 16, figs. 5, 9.

115452. **Turritella planigyrata** Guppy. Holotype. 115626. Savanetta, Trinidad, British West Indies.

Guppy, Geol. Mag., London, Dec. II. I, 1874, p. 408, pl. 18, fig. 5.

9845. Turritella planilateris Conrad. Holotype. Washita (Lower Cret.). Leon Springs, Texas.

Conrad, Rept. U. S. Mexican Bound. Surv., Emory, I, Pt. II, 1857. p. 158, pl. 14, figs. 1-1b.

=Turritella irrorata.

7870. Turritella spironema Meek.

Cotypes.

Montana (Cret.). Coalville, Utah.

Meek, Sixth Ann. Rept. U. S. Geol. Surv. Terr., 1873, p. 503.— White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I. 1883, p. 31, pl. 12, fig. 3a.

112342. Turritella subannulata Heilprin. Plesiotypes.
Pliocene. Tillys Lake, Waccamaw River, South Carolina.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 314, pl. 16, fig. 2.

113444. Turritella subannulata acropora Dall. Holotype.
Pliocene. Caloosahatchie River, near Fort Thompson.
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 315, pl. 16, fig. 4.

113446. Turritella subannulata burnsii Dall. Cotypes.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 315.

113451. Turritella subannulata intermedia Dall. Holotype. Pliocene. Shell Creek, De Soto County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 316, pl. 16, fig. 3.

113450. Turritella subannulata perincisa Dall. Holotype.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 316, pl. 16, fig. 1.

113440. Turritella subgrundifera Dall. Holotype. Oligocene. Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 313, pl. 22, fig. 23.

112587. Turritella tampæ Heilprin. Holotype.
Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 309, pl. 17, fig. 8.

112595. Turritella tampæ pagodæformis (Heilprin). Plesiotypes.
Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 310, pl. 17, fig. 9.

Oligocene. Ballast Point, Tampa, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 309.

113478. Turritella terebriformis (Conrad, ms.) Dall. Plesiotypes. Oligocene. Chipola River, Calhoun County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. II, 1892, p. 311.

115451. Turritella tornata Guppy. Holotype.

Miocene. Cumana, Venezuela.

Guppy, Quart. Journ. Geol. Soc. London, XXII, 1866, p. 580, pl. 26, fig. 12.

1870. Turritella uvasana Conrad. Holotype.

Eocene. Canada de las Uvas, California.

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, V, 1856, p. 321, pl 2, fig. 12.

[Perhaps identical with T. gatunensis. W. H. Dall.]

8657. Turritella uvasana Conrad. Plesiotypes. Colorado (Cret.). Southeast of Paria, Utah.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 195, pl. 18, figs. 11a, b.

=Turritella whitei.

13346. Turritella variata Conrad. Cotypes.

Miocene. Santa Inez Mountains, Santa Barbara County,
California

Conrad, Rept. Expl. and Surv. R. R. Miss. Riv. to Pacific Ocean, VII, 1857, p. 195, pl. 8, fig. 5.

8657. Turritella whitei Stanton. Cotypes.

22905. Colorado (Cret.). Upper Kanab Valley, Utah, twelve 22906. miles east of Walsenburg, and Huerfano Park, Colorado.

22907. Stanton, Bull. No. 106, U. S. Geol. Surv., 1893, p. 130, pl. 28, figs. 12-16.

See Turritella uvasana.

35150. Tylocrinus novus Wood. Holotype.

Upper Traverse (Dev.). Partridge Point, near Alpena, Michigan.

Wood, Smithsonian Misc. Coll., Quart., XLVII, 1904, p. 66, text fig. 4 (p. 67), pl. 16, figs. 5, 5a.

8864. Tylostoma princeps White. Holotype.

Lower Cretaceous. Six miles southwest of Tehuacan,
Puebla. Mexico.

White, Proc. U. S. Nat. Mus., III, 1880, p. 141, pl. 2, figs. 1, 2.

112184. Typhis floridanus Dall.

Pliocene. Caloosahatchie River, near Fort Thompson, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 152, pl. 9, fig. 5.

Typhis linguiferus Dall.

Oligocene. Ten-Mile Creek, near Chipola River, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 152, pl. 12, fig. 7.

8044. Uintacrinus socialis Grinnell. Plesiotypes. Colorado (Cret.). Trego County, Kansas.

Meek, Bull. U. S. Geol. and Geogr. Surv. Terr., II, No. 4, 1876,
pp. 375-378, text figs. A, B.—Clark, Bull. No. 97, U. S. Geol.
Surv., 1893, p. 21, pl. 1, fig. 1a.

41382. Ulrichia (?) confluens Ulrich. Holotype.

Warsaw (Miss.). Columbia, Illinois.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 203, pl. 12, figs. 11a, b. (Locality wrongly given in work cited.)

41383. Ulrichia emarginata Ulrich. Holotype. Chester (Miss.). Grayson Springs, Kentucky.

Ulrich, Journ. Cincinnati Soc. Nat. Hist., XIII, 1890, p. 203, pl. 12, figs. 10a-c.

107456. **Ultimus precursor** Dall. Holotype. Pliocene. Limon, Costa Rica, Central America.

Dall. Proc. U. S. Nat. Mus., XIX, 1896, p. 318, pl. 29, figs. 2, 3.

114445. Umbonium (Solariorbis) duplinense Dall. Holotype.
Miocene. Natural Well, Duplin County, North Carolina.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 46; Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 60, figs. 8, 9, 10.

113596. Umbonium (Solariorbis) floridanum Dall. Holotype.
Pliocene. Caloosahatchie, Florida.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 45; Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 60, figs. 6, 7.

114446. Umbonium (Solariorbis) undula Dall. Holotype. Miocene. Natural Well, Duplin County, North Carolina.

Dall, Proc. U. S. Nat. Mus., XVIII, 1895, p. 46; Trans. Wagner Free Inst. Sci. Phila., III, Pt. VI, 1903, pl. 60, figs. 11, 12.

9042. Unio aldrichi White. Cotypes. Laramie (Cret.). Black Buttes Station, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 62, pl. 29, figs. 2a-2b; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 433, pl. 15, figs. 4, 5.

23123. Unio barbouri White. Plastotypes.

Dakota (Upper Cret.). Five miles west of north of Fairburg, Nebraska.

White, Proc. U. S. Nat. Mus., XVII, 1894, p. 133, pl. 8, figs. 1-3.

7811. Unio belliplicatus Meek.

Cotypes.

Bear River (Cret.). Limestone Hill, Bear River, Utah.

Meek, Proc. Am. Philos. Soc., XI, 1871, p. 430; Rept. U. S. Geol.

Expl. 40th Par., IV, Pt. I, 1877, p. 165, pl. 16, fig. 4a.

8146. Unio belliplicatus Meek. Plesiotypes.
Bear River (Cret.). Mouth of Sulphur Creek, Wyoming.

White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 430, pl. 6, figs. 1-3; Bull. No. 128, U. S. Geol. Surv., 1895, p. 34, pl. 2, figs. 5, 6.

9051. Unio brachyopisthus White. Cotypes.

Laramie (Cret.). Black Buttes Station, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 64, pl. 22, figs. 2a, 2b.

107745. Unio (Unio) caloosaënsis Dall. Cotypes.
Pliocene. Caloosahatchie River, near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. IV, 1898, p. 688, pl. 25, figs. 6, 12a.

8359. Unio clinopisthus White. Holotype.

Eocene. Washakie Station, Wyoming.

White, Proc. U. S. Nat. Mus., V, 1882, p. 94, pl. 3, figs. 1, 2; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 434, pl. 28, figs. 1, 2. 13404. Unio condoni White. Cotypes. John Day (Miocene). Eastern Oregon.

White, Bull. No. 18, U. S. Geol. Surv., 1885, p. 13, pl. 2, figs. 1-3.

9033. Unio couesi White. Cotypes. Laramie (Cret.). Black Buttes Station, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 64, pl. 27, fig. 1a; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 432, pl. 16, fig. 1.

12503. Unio cryptorhynchus White. Holotype. Laramie (Cret.). Dog Creek, Montana.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 68, pl. 24, figs. 1a-1b; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 431, pl. 14, fig. 6.

12483. Unio cryptorhynchus White. Plesiotype. Laramie (Cret.). Mouth of Judith River, Montana.

White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 431, pl. 14, fig. 7.

2163. Unio danæ Meek and Hayden. Holotype and paratype.
Laramie (Cret.). Bad Lands of Judith River, Montana.

Meek and Hayden, Proc. Acad. Nat Sci. Phila., 1857, p. 145.— Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 517, pl. 41, figs. 3a-c.

9021. Unio danæ Meek and Hayden? Plesiotype.

Laramie (Cret.). Black Buttes Station, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 68, pl. 27, figs. 2a, 2b; Third Ann. Rept. U. S. Geol Surv., 1883, p. 433, pl. 18, figs. 1, 2.

21175. Unio deweyanus Meek and Hayden. Holotype and paratype.

Laramie (Cret.). Mouth of Judith River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., 1857, p. 145.— Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 519, pl. 41, figs. 2a-c.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 431, pl. 17, figs. 4, 5.

9022. Unio endlichi White. Cotypes. Laramie (Cret.). Black Buttes Station, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 66, pl. 26, figs. 1a-1b; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 432, pl. 15, figs. 1, 2.

20048. Unio felchii White. Cotypes.

Jurassic. Eight miles north of Canyon City, Colorado.

White, Bull. No. 29, U. S. Geol. Surv., 1886, p. 16, pl. 1, figs. 1-5.

9043. Unio goniambonatus White. Cotypes.

Laramie (Cret.). Black Buttes Station, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 63, pl. 29, figs. 1a-1b; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 433, pl. 19, figs. 3, 4.

9035. Unio gonionotus White.

Cotypes.

Laramie (Cret.). Upper Kanab, Southern Utah.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 71, pl. 26, figs. 2a, 2c-e; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 433, pl. 13, figs. 7, 9, 10.

8869. Unio haydeni Meek.

Cotypes.

Eocene. Near Fort Bridger, Wyoming.

Meek, Proc. Acad. Nat. Sci. Phila. for 1860, p. 312; Rept. Expl. Great Basin of Utah, Simpson, 1876, p. 364, pl. 5, figs. 11a, 11b.

9041. Unio holmesianus White.

Cotypes.

Laramie (Cret.). Black Buttes Station, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 67, pl. 22, figs. 4a-e; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 433, pl. 16, figs. 2-6.

20051. Unio iridoides White.

Cotype.

Jurassic. Eight miles north of Canyon City, Colorado.

White, Bull. No. 29, U. S. Geol. Surv., 1886, p. 17, pl. 2, figs. 3, 4.

20052. Unio lapilloides White.

Cotype.

Jurassic. Eight miles north of Canyon City, Colorado, and Como, Wyoming.

White, Bull. No. 29, U. S. Geol. Surv., 1886, p. 18, pl. 2, figs. 5, 6.

20050. Unio macropisthus White.

Cotype.

Jurassic. Eight miles north of Canyon City, Colorado. White, Bull. No. 29, U. S. Geol. Surv., 1886, p. 17, pl. 2, fig. 7.

7833. Unio meekii White.

Cotypes.

Bridger (Eocene). Church Buttes, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 43, pl. 19, fig. 1a.

8873. Unio mendax White.

Cotypes.

Eocene. Canyon of Desolation, Utah.

White, Bull. U. S. Geol. and Geogr. Surv. Terr., III, 1877, p. 605;
Third Ann. Rept. U. S. Geol. Surv., 1883, p. 433, pl. 18, figs. 3-5;
Bull. No. 34, U. S. Geol. Surv., 1886, p. 20, pl. 4, figs. 2-4.

See Unio vetustus.

7719. Unio (Baphia?) nebrascensis Meek.

Cotypes

Dakota (Cret.). Dakota County, Nebraska.

Meek, Fourth Ann. Rept. U. S. Geol. Surv. Terr., 1871, p. 303.

= Margaritana nebrascensis.

196. Unio nucalis Meek and Hayden.

Cotypes.

Jurassic. Southwest base of Black Hills, South Dakota.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., 1858, p. 52; Pal. Upper Mo., Smithsonian Contr. to Knowl. No. 172, XIV, 1884, p. 92, pl. 3, figs. 13a-c.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 426, pl. 3, fig. 4; Bull. No. 29, U. S. Geol. Surv., 1886, p. 19, pl. 3, figs. 3-7.

12474. Unio primævus White. Cotypes.

Laramie (Cret.). South of Cow Island, Missouri River,

Montana.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883. p. 70, pl. 29, fig. 3b; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 432, pl. 14, figs. 4, 5.

2162. Unio priscus Meek and Hayden. Holotype and paratypes.

2180. Laramie (Cret.). Forty miles above mouth of Yellowstone River, and Judith River, above Bad Lands,
Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., VIII, 1856, p. 117.—Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 516, pl. 43, figs. 8a-c.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 432, pl. 14, fig. 1.

9036. Unio proavitus White. Cotypes. Laramie (Cret.). Black Buttes Station, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883.
p. 65, pl. 22, figs. 3a-d; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 433, pl. 13, figs. 3-6.

9052. Unio propheticus White. Holotype.

Laramie (Cret.). Black Buttes Station, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 65, pl. 22, fig. 5a; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 433, pl. 15, fig. 3.

20061. Unio rectoides White. Cotypes. 20062. Eocene. Wales, Utah, and near Nacimiento, New Mexico. White, Bull. No. 34, U. S. Geol. Surv., 1886, p. 21, pl. 4, fig. 1: pl. 5, figs. 1, 2.

8141. Unio senectus White.

Cotypes.

12478. Laramie (Cret.). Dog Creek, Montana.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 69, pl. 28, figs. 1a-c; Third Ann. Rept. U. S. Geol. Surv.. 1883, p. 432, pl. 19, figs. 1, 2.

8098. Unio shoshonensis White.
Cotypes.

8099. Eocene. White River Valley, northwestern Colorado.
and southern Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. 1, 1883, p. 41, pl. 19, figs. 2, 2b; Third Ann. Rept. U. S. Geol. Surv., 1883, p. 435, pl. 28, fig. 3.

8849. Unio stewardi White. Cotypes.

Jurassic. Flaming Gorge, Northern Utah.

White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 426, pl. 5. fig. 1.

20053. Unio stewardi White. Plesiotypes.
Jurassic. Eight miles north of Canyon City, Colorado.
White, Bull. No. 29, U. S. Geol. Surv., 1886, p. 19, pl. 3, figs. 1, 2

2164. Unio subspatulatus Meek and Hayden. Holotype.

Laramie (Cret.). Mouth of Judith River, Montana.

Meek and Hayden, Proc. Acad. Nat. Sci. Phila., for 1857, p. 146.— Meek, Rept. U. S. Geol. Surv. Terr., IX, 1876, p. 518, pl. 41, figs. 1a, 1b.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 431, pl. 14, figs. 2, 3.

20049. Unio toxonotus White. Holotype.

Jurassic. Eight miles north of Canyon City, Colorado.

White, Bull. No. 29, U. S. Geol. Surv., 1886, p. 17, pl. 2, figs. 1, 2.

492. Unio vetusta Meek.

Bear River (Cret.). Bear River near mouth of Sulphur

Creek, Wyoming.

Meek, Proc. Acad. Nat. Sci. Phila., for 1860, p. 312; Rept. Expl. Great Basin of Utah, Simpson, 1876, p. 361, pl. 5, figs. 12a, 12b.

=Unio vetustus.

8591. Unio vetustus Meek.

Plesiotypes.

Eocene. Wales, Sanpete County, Utah.

White, Rept. U. S. Geogr. Surv. W. 100th Merid., IV, Pt. I, 1876, p. 206, pl. 21, figs. 12a-d.

=Unio mendax.

7764. Unio vetustus Meek.

Plesiotypes.

8147. Bear River (Cret.). Bear River near mouth of Sulphur Creek, Wyoming.

Meek, Rept. U. S. Geol. Expl. 40th Par., IV, Pt. I, 1877, p. 164, pl. 16, figs. 5a, b.—White, Third Ann. Rept. U. S. Geol. Surv., 1883, p. 430, pl. 7, figs. 1-4; Bull. No. 128, U. S. Geol. Surv., 1895, p. 35, pl. 3, figs. 1-4.

See Unio vetusta.

9006. Unio washakiensis Meek.

Plesiotypes.

9007. Eocene. White River, Colorado, and Church Buttes, Wyoming.

White, Twelfth Ann. Rept. U. S. Geol. Surv. Terr., Pt. I, 1883, p. 42, pl. 19, figs. 2a, 2b.

112171. Urosalpinx trossulus curtus Dall. Holotype.
Pliocene. Caloosahatchie River near Fort Thompson,
Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 148, pl. 7, fig. 12.

112173. Urosalpinx trossulus subsidus Dall. Holotype.
Pliocene. Shell Creek, De Soto County, Florida.

Dall, Trans. Wagner Free Inst. Sci. Phila., III, Pt. I, 1890, p. 148.

157844. Urosyca caudata Gabb. Plesiotype.
Lower Tejon (Eocene). Army Point near Benicia, Cali-

Stanton, Seventeenth Ann. Rept. U. S. Geol. Surv., Pt. 1, 1897, p. 1047, pl. 67, fig. 6.

